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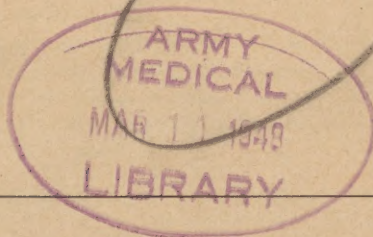
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ANNUAL REPORT

SERVICES OF SUPPLY



for the Fiscal Year ending June 30, 1942

*Annual Rep. Serv. Supply U.S.
War Dep.*

U.S. Army Service Forces

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WAR DEPARTMENT
HEADQUARTERS, SERVICES OF SUPPLY
WASHINGTON, D. C.

September 1, 1942

MEMORANDUM FOR: The Under Secretary of War
The Chief of Staff

I transmit herewith the first Annual Report of the Services of Supply for the fiscal year ending June 30, 1942.

Although the Services of Supply came into existence on March 9, 1942, and operated only during the last third of the fiscal year, this report contains material that in good part covers the entire year. This has been done because so many parts of the Services of Supply represented units that had functioned previously in some other setting. March 9 meant to these a change in direct administrative responsibility, but no essential alteration in the nature of the work they were expected to perform. This was especially true of the Supply Services. Since the entire fiscal year rather than the last third of that year provided a fairer basis for measuring progress, the year beginning July 1, 1941, and ending June 30, 1942, has been more frequently referred to than the period March 9 to June 30, 1942.

Because this is a first report on the Services of Supply as a whole, it has seemed desirable to picture the year's developments against the broader background of the mission assigned the various parts of the organization and the general problems they have faced in the accomplishment of that mission.



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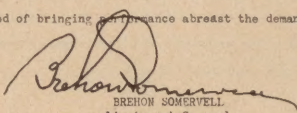
There have been important developments and changes within the Services of Supply since June 30, 1942, while this report has been in preparation. Nonetheless, the report is confined to the fiscal year ending June 30, 1942.

No description of the activities of the Services of Supply can indicate sufficiently the hours of work and the devotion to duty required to provide the United States and the United Nations with the necessary implements of war. Much has been asked of the organization and much has been given. Neither has been enough.

An organization is a group of people working together for a common end. Its success depends in the first place upon a clear understanding of the work to be done. To the accomplishment of that work, then, must be brought talents of many different kinds. These efforts must be directed so that the central purpose is realized.

Necessarily no organization can be perfect. There is always old work being finished and new work to be done. Methods of operation and procedure become outmoded. New discoveries are always being made. People change. All these bring new relationships into an organization that must be recognized. Adjustments must always be taking place.

The Services of Supply has set itself goals beyond the possibility of achievement, and must achieve them. As an organization it is seeking every possible method of bringing performance abreast the demands of these critical times.



BREHON SOMERVELL
Lieutenant General
Commanding

CONTENTS

	Page
FOREWORD	1
HEADQUARTERS, SERVICES OF SUPPLY:	
Requirements Division	16
International Division	17
Resources Division	21
Procurement and Distribution Division	23
Operations Division	26
Military Personnel Division	27
Civilian Personnel Division	29
Training Division	31
Fiscal Division	32
SUPPLY SERVICES:	
Ordnance Department	35
The Quartermaster General	43
Medical Department	51
Corps of Engineers	59
Signal Corps	68
Chemical Warfare Service	73
Transportation Service	77
General Depot Service	82
ADMINISTRATIVE SERVICES:	
Chief of Administrative Services	83
Statistical Service	84
The Adjutant General's Office	85
The Judge Advocate General's Department	87
Provost Marshal General	89
Office of the Chief of Chaplains	90
Special Service	91
Army Exchange Service	93
Finance Department	94
Women's Army Auxiliary Corps.	96
National Guard Bureau	97
Office of the Executive for Reserve and R. O. T. C. Affairs	99

ANNUAL REPORT SERVICES OF SUPPLY

FOREWORD

The fiscal year ending June 30, 1942, was a decisive one to the defense of the United States. Before the year began, we had taken important steps to strengthen our armed forces and to provide them with the best in military equipment. The year just ended demonstrated the wisdom of those beginnings.

When Japan, Germany, and the Fascist government of Italy declared war against our country, our efforts to serve as the arsenal of democracy and to build our defenses were changed into efforts to provide ourselves and our allies with the means for defeating a direct attack upon us. The Nation's raw materials, its plants, its labor, its technological skill were called upon to provide munitions upon an unprecedented scale.

During the fiscal year 1941, total funds provided the War Department for procurement of equipment and construction of new facilities totaled some 11½ billion dollars. To this was added another 3½ billion under the Lend-Lease Act. In his report for the fiscal year 1941 the Under Secretary of War said that procurement appropriations for that year were 20 times the appropriations for 1940 and 30 times 1939. In 1941 the procurement funds available to the War Department were more than 10 times the total available from 1920 to 1940.

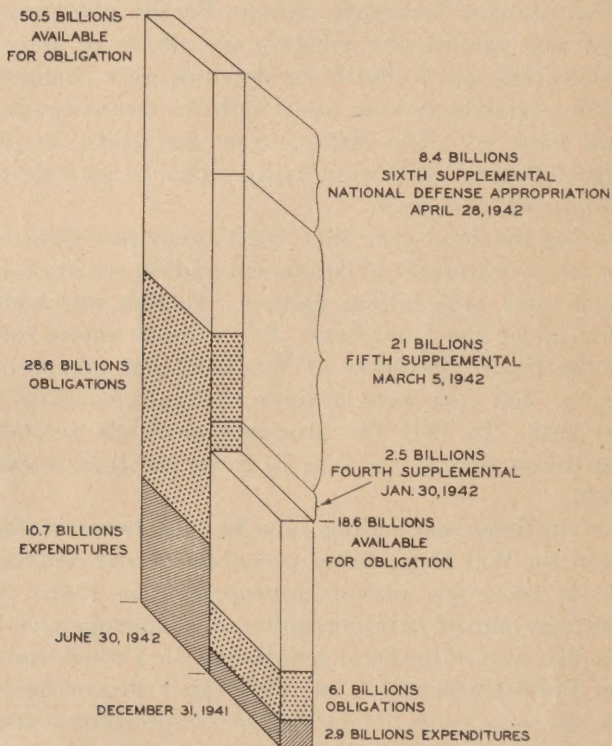
For the fiscal year ending June 30, 1942, however, the money appropriated for War Department procurement and construction was more than six times the amount appropriated in 1941. About one-third of the huge sum of 72 billion dollars was appropriated by the Congress in the first half of the fiscal year before the United States was attacked. After Pearl Harbor the Congress tripled the new procurement funds.

At the same time, obligations and expenditures for delivered supplies were stepped up. Procurement activity was accelerated in the last 6 months of the year. Whereas obligations for supplies and new capital facilities amounted to more than 9 billion dollars on December 31, 1941, they came to nearly 43 billion on June 30, 1942. Expenditures for delivered supplies were nearly 4 billion on December 31, and were more than 13 billion on June 30. In the last 6 months of the fiscal year 1942 contractual activity and the delivery of supplies were four times greater than in the first 6 months. These figures include aircraft. Other parts of the war program likewise expanded.

On January 13, 1942, the President of the United States announced the creation of the War Production Board, which absorbed the existing Office of Production Management and the Supply, Priorities, and Allocation Board. Upon the Chairman of the War Production Board was conferred broad power to direct and supervise the Nation's war

CHART I

STATUS OF PROCUREMENT FUNDS FOR FISCAL YEAR 1942 (EXCLUSIVE OF AIR FORCE PROCUREMENT)



procurement effort. The Office of Price Administration was strengthened by legislation. The War Labor Board, the National Housing Agency, the War Manpower Commission, and the Office of War Information were created. A majority of the needs foreseen by the Industrial Mobilization Plans were recognized and steps were taken to meet them.

On March 12, 1942, the Under Secretary of War and the Chairman of the War Production Board signed a joint agreement defining their

respective spheres of operation. The War Department was responsible for determining military requirements, including new productive facilities, transportation, and communication. These requirements were to be translated into raw materials, tools, and labor. In the second place, the War Department was to continue to negotiate, place, and administer all contracts for procurement. In the third place, the Department was to determine specifications for its requirements and engage in research and development work. Lastly, the conservation of essential materials and the expediting of productive output were confirmed as War Department duties.

In order that the War Department might more efficiently perform its responsibilities, the President, on February 28, 1942, by Executive Order No. 9082, included in his reorganization of the War Department the creation of a Services of Supply, effective March 9, 1942.

Prior to that date, responsibility for the direction and supervision of military supply activities had been divided between the Supply Division (G-4) of the War Department General Staff and the Office of the Under Secretary of War. The planning of quantities and types of military supply and equipment was done by G-4. Construction and transportation planning was also its responsibility. On these matters the Supply Division of the General Staff dealt directly with the Supply Arms and Services.

By amendment to the National Defense Act, June 4, 1920, the Assistant Secretary of War was "charged with supervision of the procurement of all military supplies and other business of the War Department pertaining thereto." When the position of Under Secretary of War was created by the act of December 16, 1940, the Secretary of War was given the responsibility for supervising procurement, with specific provision that he might delegate this activity to the Under Secretary. This had been done.

The procurement supervisory duties of the Office of the Under Secretary of War expanded as procurement grew. From a total of 181 persons in the Office of the Assistant Secretary of War on July 1, 1940, the number of officers and civilians in the Office of the Under Secretary of War reached nearly 1,200 by the end of the calendar year 1941. Problems common to all the Supply Arms and Services demanded consideration and policy determination.

At the beginning of the fiscal year 1942 the Office of the Under Secretary of War was made up of an Executive Office, a Defense Aid Division, and four branches. The Planning Branch consisted of a Facilities Division, a Commodities Division, a Priorities Division, a Machine Tools Division, a Construction Division, a Standards Division, a Legal Division, and a Liaison Division that dealt with labor and manpower questions. A Purchase and Contract Branch had nine

principal sections: Legal, Advance Payments, Construction, Procurement Progress, Procurement Control, Defense Aid, Air Corps, Ordnance, and Office Administration. A Production Branch was organized into seven divisions: Priorities; Ordnance; Aircraft; Construction, Power, and Fuel; Plant Protection; Miscellaneous; and Administrative. A Statistics Branch compiled data about procurement progress and priorities control.

During the first half of the fiscal year 1942 a number of changes were made. An Administrative Branch performed all housekeeping duties, along with a number of fiscal supervisory responsibilities, including the issuance of tax amortization Certificates of Necessity. After extensive study, a regrouping of other activities into two major branches was accomplished. A Resources Branch took over all questions of priorities, facilities, manpower, and standards. A Procurement Branch took over questions of contract letting and expediting production. The Defense Aid Division and Statistics Division continued to have separate status.

Once the specified supplies had been procured by the Supply Arms and Services acting under the Under Secretary of War, the distribution of those supplies was once again controlled by the Supply Division of the General Staff.

The Supply Division of the General Staff consisted, in addition to an executive office, of a Planning Branch, Development Branch, Construction and Real Estate Branch, Supply Branch, Transportation Branch, and Fiscal Branch. The supervisory and administrative activities of these branches had likewise expanded. From a planning arm G-4 Division of the General Staff had developed into an agency for directing and coordinating important parts of the work of the Supply Arms and Services.

The Supply Arms and Services, however, were supervised not alone by the G-4 Division of the General Staff and the Office of the Under Secretary of War. Each Supply Arm and Service was responsible for organizing, training, and technically directing appropriate service and combat units attached to the Army in the field. Over these matters other divisions of the General Staff exercised control.

The creation of the Services of Supply brought two especially important changes. It united under one command below the level of the Chief of Staff and the Under Secretary of War the over-all planning of military requirements, the translation of those requirements into needs for resources, the supervision of procurement and production, and control of supply distribution and of the organization and training of field units by the individual Supply Arms and Services. The detailed supervision of certain phases of the work of the Supply Arms and Services no longer had to occupy the atten-

tion of the General Staff. Secondly, the reorganization brought together below the level of the Chief of Staff various Administrative Services providing common needs of all the military establishment.

War Department Circular No. 59, dated March 2, 1942, stated that the following Supply Arms and Services and War Department offices and agencies would come under the direct command of the Commanding General, Services of Supply: those parts of the Office of the Under Secretary of War engaged in functions of procurement and industrial mobilization; the Budget Advisory Committee, The Surgeon General, the Chief of Engineers (except for civil functions on which he was to continue to report directly to the Secretary of War), the Chief Signal Officer, the Quartermaster General, the Chief of Ordnance, the Chief of Chemical Warfare Service, the supply functions of the Chief of Coast Artillery, the Chief of Finance, the Judge Advocate General (except for courts martial and certain legal matters on which he would report directly to the Secretary of War), the Adjutant General, the Provost Marshal General, the Chief of Special Service, the Chief of Chaplains, all corps area commanders, all general depots, ports of embarkation, staging areas, and regulating and reconsignment stations for overseas shipments.

Circular No. 59, W. D., 1942, provided that "the Commanding General, Services of Supply, shall, on procurement and related matters, act under the direction of the Under Secretary of War and shall, on military matters, report to the Chief of Staff."

The creation of a Services of Supply was not an unprecedented step. In February 1918, General Pershing organized a unified Services of Supply to handle supply and administrative work for the A. E. F.

The mission assigned the Services of Supply was to assume responsibility for meeting the military requirements of the Army for services and supplies, with the exception of the Army Air Forces. Specifically, the Services of Supply was assigned the following duties:

(1) Direction and supervision of engineering research, development, procurement, storage, and distribution of supplies and equipment, except for the Army Air Forces.

(2) Establishment of purchasing and contractual policy and procedure.

(3) Transportation and traffic control.

(4) Army construction.

(5) Consolidation with Army supply programs of requirements for the Navy and for the United Nations procured by the Army.

(6) Preparation of the War Department budget and its presentation to the Bureau of the Budget and to Congress.

(7) Administration of Army-wide functions in premilitary training, in mobilization of industrial manpower, and in labor relations.

(8) Operation of replacement training centers and schools for Supply Arms and Services.

(9) Operation of all reception centers.

(10) Organization of all Services of Supply units, as directed by the War Department.

(11) Training of all units assigned to the Services of Supply.

(12) Assignment of officers of the Services of Supply, including Army Air Forces and Army Ground Forces personnel on duty therewith.

(13) Supply of Services of Supply personnel and units to the Army Air Forces, Army Ground Forces, theaters of operation, and overseas forces.

(14) Development of tactical and training doctrine. Tables of Organization, Tables of Basic Allowances, military characteristics of weapons and equipment, and operational changes needed in equipment for the Services of Supply.

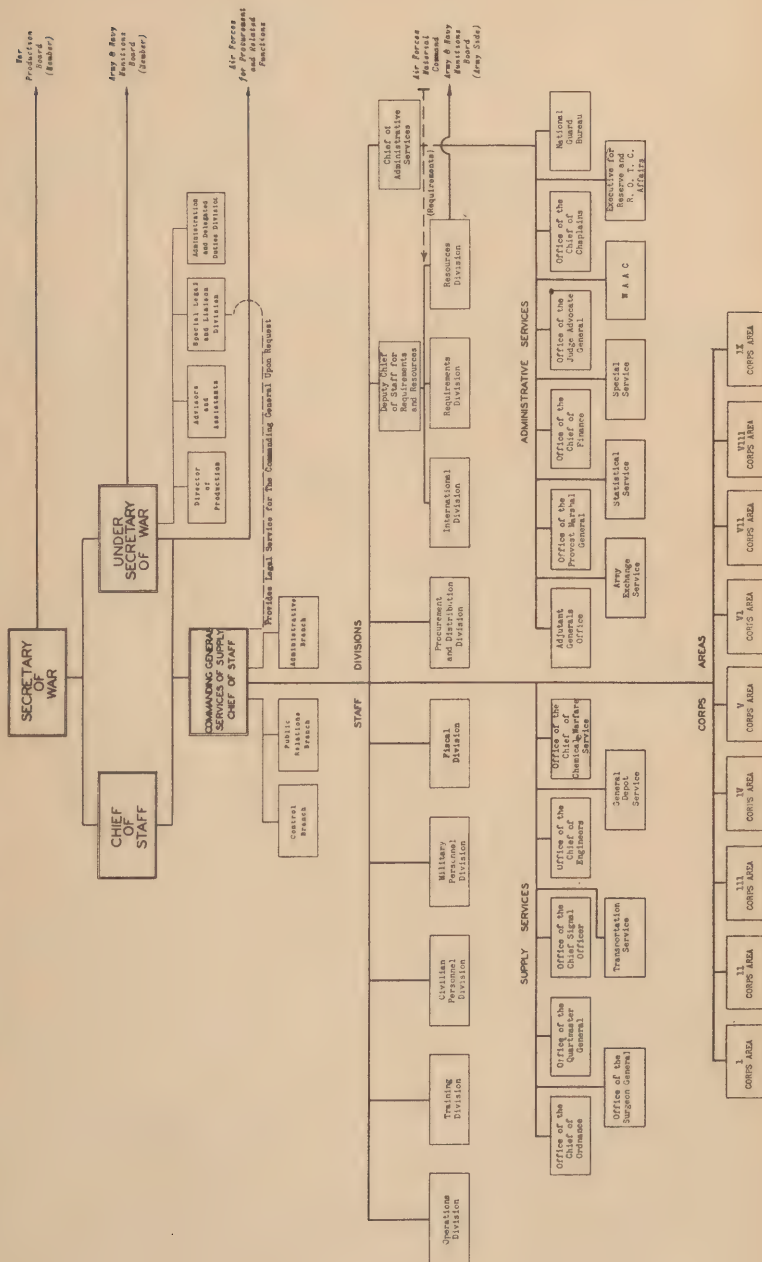
(15) Command control of all stations except those assigned to the Army Air Forces, defense commands, and theaters of operations.

The changes introduced on March 9, 1942, were in the overhead direction and supervision of the supply and administrative activities of the War Department. The individual Supply Arms and Services (now called Supply Services) remained unchanged, with three exceptions. The transportation work of The Quartermaster General was made part of a new Supply Service—the Transportation Service. The general depots which reported directly to the War Department were transferred to a second newly created Supply Service—the General Depot Service. Thirdly, the procurement activities of the Coast Artillery Corps were transferred to the Ordnance Department with the absorption of that Corps by the Army Ground Forces. The other Supply Services—Corps of Engineers, Medical Department, Chemical Warfare Service, and the Signal Corps—remained as before.

To the list of Administrative Services was added the Office of the Provost Marshal General, the Statistical Service, Special Service, the Army Exchange Service, and the Women's Army Auxiliary Corps. Of the older services—The Adjutant General's Office, the Office of the Judge Advocate General, the Chief of Chaplains, the Chief of Finance, the National Guard Bureau, and the Executive for Reserve and R. O. T. C. Affairs—the most important change was the transfer of the Chief of Finance's duties as Budget Officer of the War Department to the Headquarters Staff, Services of Supply.

The Services of Supply differentiated three major parts of its organization: Headquarters, Services of Supply, which consisted of the Office of the Commanding General and nine staff divisions; the Supply Services; and the Administrative Services. A fourth part, the corps

ORGANIZATION OF THE SERVICES OF SUPPLY ON JUNE 30, 1942



areas, has not been included here since their reorganization to fit the new structure and their redesignation as service commands was not accomplished until after the end of the fiscal year.

PROCUREMENT PROGRESS

Planning.—One of the most important developments of the year was in the definition of military requirements. Indispensable to the Nation's war effort was a detailed statement of needed equipment and supplies. All other administrative effort had to stem from such an over-all program.

A military supply program had to begin with a concept of grand strategy. Such a concept embraced the planned operations of the United Nations. Requirements had to be adjusted in the light of productive potential. And there were the needs of the Navy, of transportation, of repair and maintenance, and the indispensable needs of the civilian population. No balancing of all these needs with the Nation's productive resources could be attempted until the needs themselves were forecast.

During the fiscal year the Services of Supply completed the most inclusive effort yet made to predict over a period of time the military requirements for the war. First published in the spring of 1942, the Army Supply Program forecast for 2 years in advance military needs for all essential supplies and equipment, including new construction and maintenance. Army Air Forces requirements were made a part as were the needs of the United Nations.

The Army Supply Program had to be changed continually as the strategic situation varied, as new needs appeared, as new types of equipment were developed, and as American productive potential increased or limited the expected output. While changes had to be frequent, the Army Supply Program's basic function was enduring.

With a statement of military requirements available to those responsible for mobilizing the nation's industrial facilities, it was possible for them to review military and other needs and to make adjustments. The appropriation of funds by Congress likewise followed determination of military needs.

The balancing of the military program with other programs depended upon translation of military end products into the common denominators of raw materials, industrial plant, and labor. During the past fiscal year the Services of Supply developed means for stating needs for raw and basic industrial materials under the Army Supply Program. These raw materials data enabled the Services of Supply to present information to the Requirements Committee and the Materials Branches of the War Production Board.

Past facilities records were used to the fullest during the year in locating essential machine tools and other productive facilities for

military goods. Increased efforts were devoted to utilizing every existing available productive facility.

Development.—To provide the finest equipment possible, the Army has undertaken research and development programs in cooperation with industrial and scientific research organizations. For the fiscal year 1942 the total expenditures for research and development by the Supply Services was more than \$100,000,000. This was four times the expenditure for the fiscal year 1941. Already the results of research and development work have paid for themselves many times over.

Improved weapons of all kinds have rewarded Army research. Antitank hand and rifle grenades, new types of armor-piercing ammunition, new antitank and antiaircraft guns, self-propelled mounts, and new tanks have been developed in the past fiscal year. The Motor Transport Service produced a new amphibian truck and a truck designed to carry water under varying climatic conditions. Blackout lighting for all Army motorized equipment has resulted. The Corps of Engineers developed new temporary bridges. Amphibian boats have been placed in production, and great strides have been made in the field of passive protection through camouflage.

Purchasing.—The War Department began to let contracts on a negotiated basis during the fiscal year 1941. In the past year this practice was extended. Contracting by negotiation, however, has not meant an abandonment of competitive bidding. Rather, informal bids by telephone and by air mail have been obtained. In this way, the Army has been able to obtain the lowest possible prices and at the same time to let contracts with considerable dispatch.

Before December 7, 1941, all negotiated contracts for supplies over \$500,000 were subject to the specific approval of the Under Secretary of War. Since December 7, the Supply Services have been given authority to approve all negotiated contracts for supply under \$5,000,000. Most Supply Services have delegated this authority to their local procurement offices. The clearance of contracts with the War Production Board (formerly O. P. M.) was discontinued.

The President by Executive Order No. 9127 on April 8, 1942, authorized the renegotiation of contracts when it was evident that existing prices were resulting in the accumulation of excess profits by war contractors. In the Sixth Supplemental Appropriation Act for the fiscal year 1942 the Congress authorized the Secretary of War to require contractors to renegotiate contract prices and to withhold or recover any part of excessive profits. A Price Adjustment Board was established within the War Department, and the chief of each Supply Service established Price Adjustment Sections. Savings of several million dollars had been effected by June 30, 1942.

The Supreme Court, in the case of *Alabama v. King and Boozer* in November 1941, decided that State sales taxes must be paid by contractors buying supplies for the United States Government. This has created difficulties that have required attention by procuring officers. On cost-plus-a-fixed-fee contracts the War Department had to reimburse contractors for sales and other excise taxes paid.

Regulations governing purchasing operations by the Services of Supply were consolidated and simplified into a manual of 100 pages. These regulations were expected to speed up procurement operation.

On March 26, 1942, the President by Executive Order No. 9112 authorized the Army, Navy, and Maritime Commission to make or guarantee loans financing a contractor or subcontractor engaged in war work. The Federal Reserve Banks operated as agents in carrying out this power. By the end of the year, the War Department had entered into 468 commitments guaranteeing loans.

Production.—The past fiscal year witnessed the beginning of large scale war production. As mentioned before, during the fiscal year War Department expenditures (representing deliveries) were over 17 billion dollars. Many newly constructed plants came into production and the conversion of many other plants was completed. A larger and larger portion of the Nation's productive effort went for war supplies.

During the year much emphasis was placed upon continuity of production. Records were set up so that as one contract neared completion another contract was awarded. And even before a letter of intent or a formal award of a contract was issued, contractors were given unofficial assurances. Except in those instances where Army supply items were outmoded, or where specifications were changed, production lines have not been permitted to close down.

With the growing inadequacy of raw materials to meet demands, the Services of Supply placed more emphasis on every effort to conserve materials. Specifications were changed and certain uses of metals eliminated. Less scarce metals were substituted. An estimated 25 percent reduction in the use of copper in the last half of the fiscal year was realized from the development of steel cartridge cases. The substitution of wood for steel in the cargo bodies of motor vehicles will save 75,000 tons of steel in 1942 and some 350,000 tons in 1943.

Many specifications were changed in order to get speed. American genius has been evident in every field of War Department equipment. Wherever the usability of any weapon or article would not be impaired by a change in production processes, the Services of Supply has been eager to accept proposals made to it.

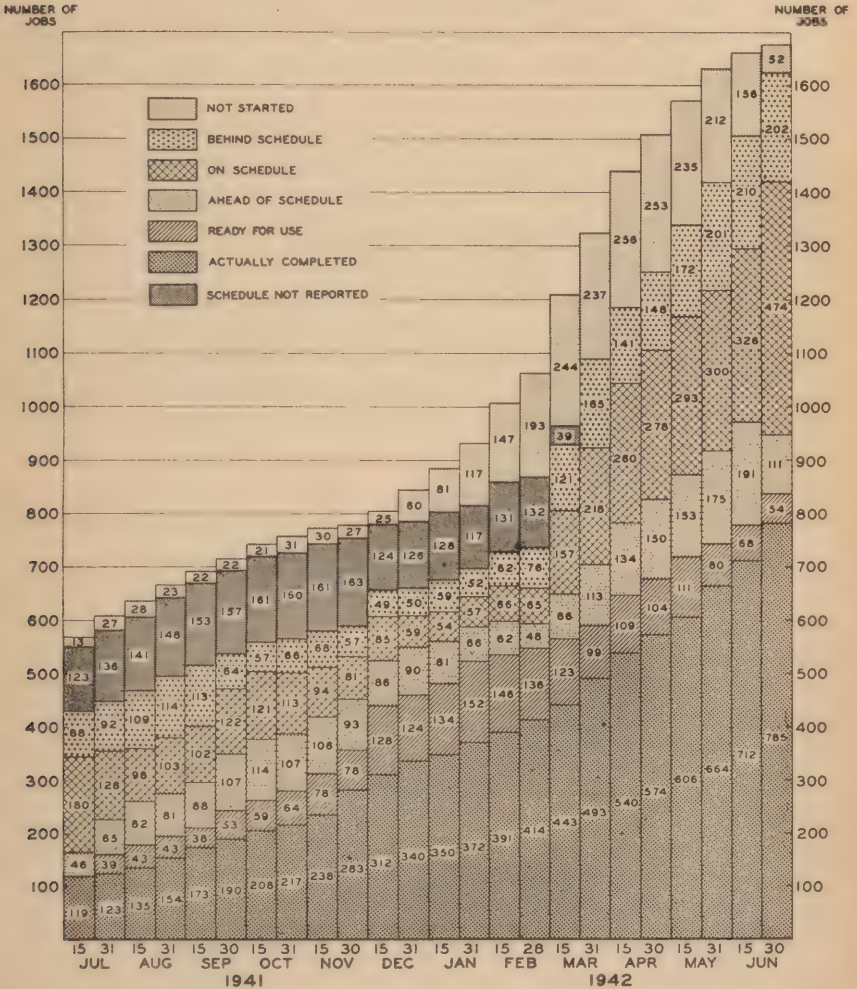
Construction.—The additions to capital plant required to house an expanding Army and to produce the necessary equipment and supplies made substantial progress in the past fiscal year. As of June 30, 1942,

the estimated cost of the War Department construction program, as planned at that time, was about 7½ billion dollars. More than 57 percent of this program was already in place.

CHART III

NUMBER OF JOBS BY COMPLETION STATUS

ALL PROGRAMS



Of the War Department's construction program, the largest single element was for Ordnance plants and Ordnance depots, which totaled more than 2½ billion dollars. Another 2 billion dollars was planned for airfields, Army Air Forces schools, and depots. Nearly 1½ billion was for the construction of camps and cantonments. About 1 billion

dollars of the program was for staging areas, overseas discharge and replacement depots, port facilities, storage depots, and other troop facilities.

Training.—By June 30, 1942, the Services of Supply troop units were about one-fifth of the total enlisted and commissioned personnel of the Army located within the United States. It had about one-third of the officers.

Most of the officers and men were in training for assignment to supply, repair, and technical work such as medicine and engineering with United States Army forces overseas. Others were engaged in various phases of procurement to build up the supplies and the men for field operations.

The training facilities and opportunities offered by the Services of Supply have been extensive. The aptitudes and skills demanded to supply a modern Army are not dissimilar from the aptitudes and skills needed in a great industrial nation. The Services of Supply has trained persons as cooks, bakers, bookkeepers, accountants, warehouse superintendents, clerks, personnel and classification workers, radio mechanics and operators, telephone repairmen and operators, motor mechanics, and motion-picture operators. Advanced training in engineering, physics, chemistry, and medicine has been provided. Special Service has operated a correspondence school so that all soldiers, wherever located, might have an opportunity to continue their education.

Distribution.—As war production has reached new heights, problems of supply storage and transportation have become important. Many new depots have been constructed. The Transportation Service operated a system of control of finished goods from plants and depots to ports of embarkation.

Before the war it had been necessary to develop extensive port facilities to which goods under lend-lease provision were shipped for use by nations resisting the Axis. With the dispatch of American troops overseas, the Services of Supply had to build more extensive facilities overseas to handle American goods and American soldiers. This construction proceeded rapidly, and extended around the world by the end of the fiscal year.

With each overseas convoy went the equipment required by a modern effective fighting force. Automatically thereafter, subsistence supplies and other expendable goods were shipped. Commanders of American overseas forces through their supply services requisitioned ports of embarkation for special supplies that were required.

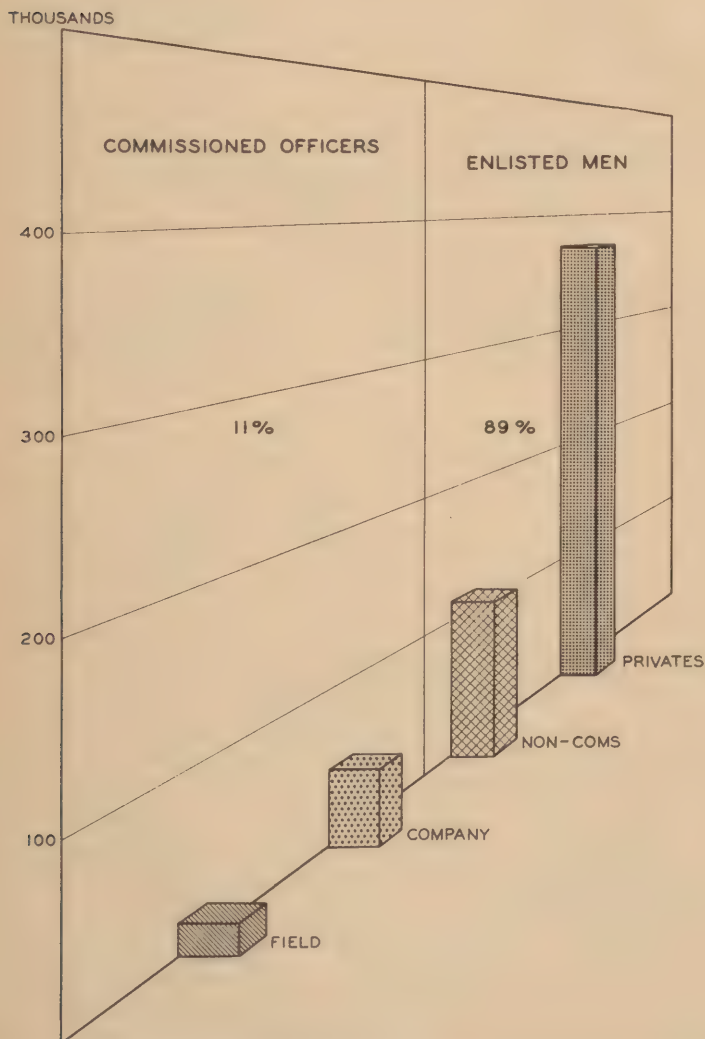
Improvements in fiscal procedure.—At the same time that Army appropriations have grown, improvements in accounting and fiscal procedure were made. By the Sixth Supplemental National Defense

Appropriation Act for the fiscal year 1942 the War Department was permitted to carry all current appropriations, as well as those for the two preceding fiscal years, as open accounts until June 30, 1943.

CHART IV

SERVICES OF SUPPLY STRENGTH BY GRADES

CONTINENTAL U.S.—JUNE 30, 1942



This put an end to the need for closing appropriation accounts at the end of a fiscal year. It has no longer been necessary to seek reappropriation of unobligated funds.

At the same time the number of appropriation titles has been reduced. For example, the Sixth Supplemental National Defense Appropriation Act of 1942 included in the one title "Finance Service, Army," seven former appropriation titles—Pay of the Army, Travel of the Army, Expenses of Courts Martial, Apprehension of Deserters, Finance Service, Claims for Damages to and Loss of Private Property, and Claims of Officers, Enlisted Men and Nurses of the Army for Destruction of Private Property. In the Appropriation Act for the fiscal year 1943 a single title, "Engineer Service, Army," included this and seven previous titles.

Accounting procedures and disbursement activities have been generally improved.

This brief summary has by no means encompassed the full range of activities under the Services of Supply. A fuller account is presented in the description of the work of each Staff Division, Supply Service, and Administrative Service, that follows.

HEADQUARTERS

The headquarters organization, Services of Supply, as set up on March 9, 1942, represented an amalgamation of duties that had previously been located in the General Staff and the Office of the Under Secretary of War.

In the Office of the Commanding General, Services of Supply, were the Chief of Staff, a Deputy Chief of Staff for Requirements and Resources, and a Public Relations Branch, an Administrative Branch, and a Control Branch.

The Chief of Staff served as the deputy for the Commanding General on all matters concerning the Services of Supply. The Deputy Chief of Staff for Requirements and Resources supervised the work of the Requirements Division, the International Division, and the Resources Division. The Deputy Chief represented the Services of Supply on the Requirements Committee of the War Production Board. The Public Relations Branch prepared and edited appropriate information for release about the work of the Services of Supply and provided means for a common meeting between industry, labor, and the Services of Supply. The Administrative Branch provided personnel, supply, travel, mail, and other services to the headquarters organizations, Services of Supply. The Control Branch evaluated the effectiveness and progress with which plans of the Commanding General were executed, and studied continuously the administrative organization of the Services of Supply in order to improve the efficiency of operations.

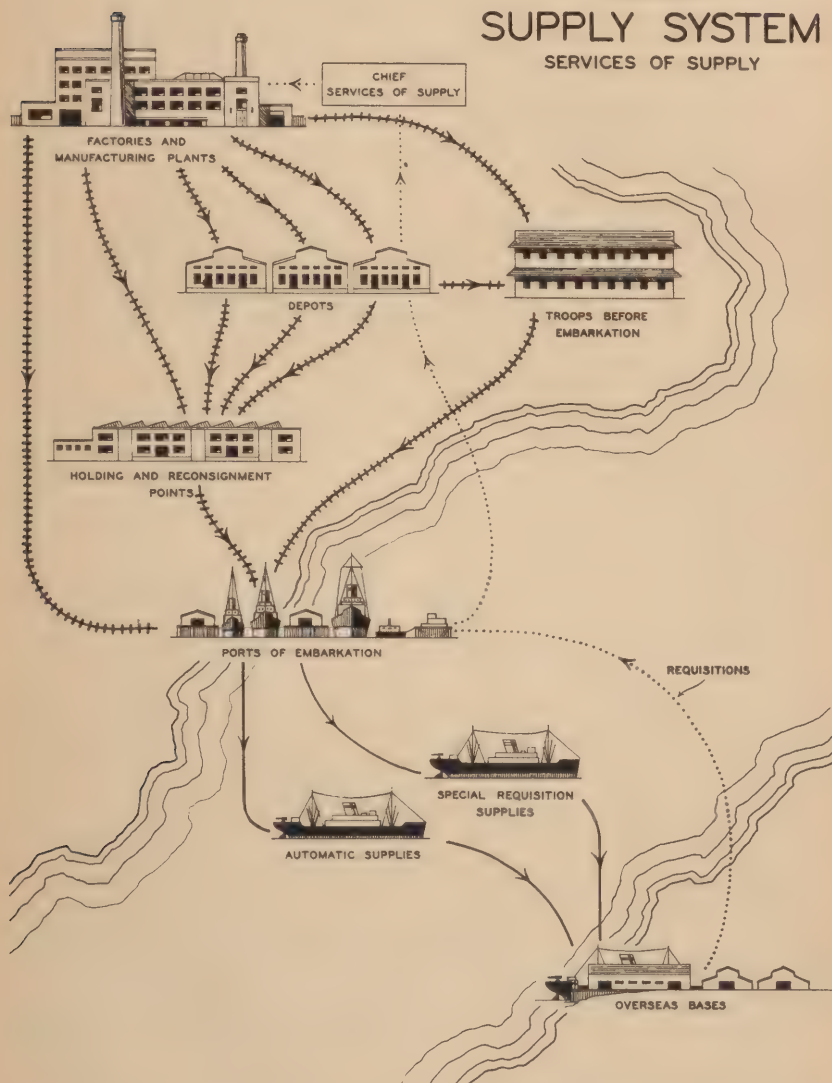
On June 30, 1942, the Chief of Staff was Brig. Gen. W. D. Styer; the Deputy Chief of Staff for Requirements and Resources, Brig. Gen. L. D. Clay; the Director of the Public Relations Branch, Col. A. R.

Ginsburg; the Director of the Administrative Branch, Col. J. N. Dalton; and the Director of the Control Branch, Col. C. F. Robinson. On March 9, 1942, the headquarters organization of the Services of Supply

CHART V

OVERSEAS SUPPLY SYSTEM

SERVICES OF SUPPLY



Supply, including the Transportation Service and the General Depot Service, consisted of 2,209 civilian employees and 516 officers. On June 30, 1942, there were more than 3,000 civilian employees and 936 officers.

HEADQUARTERS, SERVICES OF SUPPLY

REQUIREMENTS DIVISION

Drawing its initial personnel and functions from the Supply and Construction Branches of the G-4 Division of the General Staff, the Requirements Division was created on March 9, 1942, as a major unit of the staff of the Commanding General, Services of Supply. The Division had the mission of setting up the long-range munition and equipment needs required to supply the Army of the United States and the armies of the United Nations. For ground and service units of the Army, the Division supervised the development of new equipment and the establishment of basic allowances. It determined construction needs.

The Requirements Division obtained the requirements in equipment of Army ground types of the United Nations through the International Division, of the Navy from the Navy Department, and equipment and construction requirements from the Army Air Forces. It assembled and published the over-all requirements in five parts of the Army Supply Program.

Development Branch.—World-wide warfare required vastly improved military equipment. There was a need for better communication, highly mobile weapons, increased fire power, improved fire control, and better protection to advance troops and installations. In order that American matériel might excel, technological progress of the enemy was followed closely. The shortage of such vital materials as rubber, silk, wool, copper, and tin required numerous substitutions. American ingenuity redesigned many items of equipment to perform satisfactorily while using available substitutes.

Among new weapons and processes were powerful antitank hand and rifle grenades and new types of antitank guns and armor-piercing ammunition, all of which go far toward placing ground troops on an equal footing in combat against armored vehicles. Antiaircraft directors, fire control equipment, and aircraft locators made marked strides. And the new General Lee M4 medium tank entered quantity production.

Allowance Branch.—The equipment of field armies today were studied constantly and changed to keep pace with the changing tactics and techniques of modern warfare.

Liaison Branch.—The Supply Services were guided in the preparation of long-range equipment needs by the Liaison Branch. Beginning in April 1942, the branch represented the Army on the End Products Committee of the War Production Board, obtaining and presenting Army requirements. This committee adjusted the demand for common end products needed by the armed services and civilians. The committee also guided decisions about conversion of plants to wartime production.

Program Branch.—Begun in the G-4 Division of the General Staff, the Requirements Division completed the preparation of an over-all advance program for military equipment. Presented in five sections, the Army Supply Program set forth the estimated munition requirements of the United Nations and of United States forces for the calendar years 1942, 1943, and 1944, and the construction requirements for the United States Army during the calendar year 1942.

The Army Supply Program established the goal in military munitions of Army types to be produced by the nation's industry. Its purpose was to insure the adequate provision of munitions and equipment without establishing excessive reserves at the expense of the civilian economy. This program was the basis for estimating budgetary needs of the War Department in presenting requests to the Bureau of the Budget and to the Congress.

As corollaries to the study of long-range supply goals, the Program Branch furnished to the Munitions Assignments Committee (Ground) and to the Munitions Assignments Board basic data about Army requirements for the committee's use in allocating United States procured supplies to the United Nations.

Construction Branch.—The construction program published in section V of the Army Supply Program was developed by the Chief of Engineers and approved by the Construction Branch, whose primary job was the coordination of construction requirements and the formulation of long-range construction plans. Construction planning for a 3,600,000 Army was initiated early in 1941 and the program was ordered into execution in December 1941 and January 1942. Certain facilities were speeded up in order to meet new plans, such as the 750,000-man increase in the 1942 troop basis during May 1942. Capacities of existing posts were increased, and schools, replacement training centers, and staging areas expanded.

Plans were begun during the fiscal year for construction needed to house the 1943 troop basis.

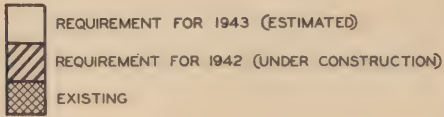
A constant effort was made to conserve and utilize as efficiently as possible the limited available supply of materials, labor, and construction management in meeting military needs.

From March 9 to May 31, 1942, the Director of the Requirements Division was Col. Cyrus H. Searcy. After June 1, 1942, the Director was Col. Walter A. Wood, Jr.

INTERNATIONAL DIVISION

The International Division was the central agency of the Services of Supply for the consideration of the matériel needs of the United Nations. It was created March 9, 1942.

ESTIMATED NUMBER OF MEN THAT CAN BE HOUSED IN THE UNITED STATES - 1942 - 1943



NUMBER OF ENLISTED MEN

4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0

Ground

Air

Ground &
AirGround &
Air

1942

NUMBER OF ENLISTED MEN

4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0

The International Division brought together the Defense Aid Division of the Office of the Under Secretary of War and the Defense Aid Section of the G-4 Division of the General Staff. Both had been located in the same building close to the Deputy Chief of Staff for Supply. A Director of Defense Aid exercised general supervision of the work of both units; he became Director of the International Division. The Defense Aid Section of G-4 was responsible for including Lend-Lease requirements in the War Department procurement program. The Defense Aid Division of the Office of the Under Secretary of War was responsible for supervising the purchase of Lend-Lease supplies.

On July 10, 1941, the Secretary of War directed the appointment of a Defense Aid Supply Committee to determine supply requirements for military purchase in cooperation with representatives of foreign governments, to make recommendations on standardization of types, to allocate available production between the United States and foreign needs, and to plan diversions of matériel. The chairman of this committee was a representative of the Assistant Chief of Staff, G-4, and on the committee was a representative from the Office of the Under Secretary of War. Representatives from the Supply Arms and Services and from foreign governments were invited to sit. Permanent working subcommittees were established to take over much of the detailed consideration. The United Kingdom, the Netherlands, the East Indies, China, Brazil, and the Union of Soviet Socialist Republics all appointed members. After October 1, the Defense Aid Director was Chairman of the Defense Aid Supply Committee.

On May 19, 1942, the Defense Aid Supply Committee was reconstituted as the International Supply Committee and assigned responsibility for obtaining agreement about types of matériel to be procured by the War Department for foreign nations, for obtaining agreement on general programs of foreign requirements, and for determining procurement of foreign items not common to the Army Supply Program.

After December 7, 1941, the automatic transfer to foreign governments of munitions which had been purchased to fill foreign requisitions came to an end. Each country's requirements were reconsidered. All assignments of munitions from December 7, 1941, to the end of January 1942, were subject to the final approval of the Deputy Chief of Staff.

On January 26, 1942, the President, with the Prime Minister of Great Britain, created the Munitions Assignments Board to serve as an agency of the newly created Combined Chiefs of Staff. The duty of this board was to assign munitions to various ones of the

United Nations in accordance with the strategic demands. The Munitions Assignments Board controlled all munitions.

In each of the Supply Services there was set up a joint United Kingdom-United States Committee to make preliminary decisions about the advisability of assignment of munitions.

The International Division supervised the financial and statistical reporting of Supply Service activities under the lend-lease program and acted as a central information source on lend-lease matters for the War Department, Office of Lend-Lease Administration, and other governmental agencies.

From March 11, 1941, to June 30, 1942, more than 20,000 foreign requests for war materials were considered by the International Division and its predecessor organizations.

Military missions.—On August 27, 1941, the Secretary of War designated Brig. Gen. John Magruder to serve as Chief of a United States Military Mission to China. General Magruder was directed to advise the Chinese Government in obtaining military assistance.

With the advent of war and the Japanese occupation of Burma, the functions of the Military Mission were changed to include those of a theater of war. Lt. Gen. Joseph W. Stilwell arrived in China on March 4, 1942, to relieve General Magruder as Chief of the United States Military Mission to China. Afterward the mission came to an end and was replaced by the United States Task Force in China, India, and Burma.

Brig. Gen. Russell L. Maxwell was appointed Chief of the United States Military North African Mission on September 27, 1941. He arrived in Cairo, Egypt, 2 months later. On June 16, 1942, Major General Maxwell was designated Commanding General for the United States Army forces in the Middle East. The North African Mission became the North African Service Command.

On September 27, 1941, Brig. Gen. Raymond A. Wheeler was designated Chief of the United States Military Mission to Iran. General Wheeler arrived at Baghdad 2 months later. In April 1942, the work of this mission was transferred to the Services of Supply of the United States Task Force in China, India, and Burma. General Wheeler became Commanding General, Services of Supply, for General Stilwell.

A United States Military Mission to the Union of Soviet Socialist Republics was formally organized on November 5, 1941, with Maj. Gen. John N. Greeley as Chief. On May 2, 1942, the Mission was dissolved.

These military missions were organized in order to insure maximum effectiveness of lend-lease aid to those countries deemed vital to the defense of the United States. On April 28, 1942, the home

offices of the various missions were organized into the Missions Branch of the International Division.

In addition to the Missions Branch, the organization of the International Division on June 30, 1942 consisted of a Distribution Branch, a Requirements and Procurement Branch, and an Administrative Branch. The Director of the Division was Brig. Gen. Henry S. Aurand.

RESOURCES DIVISION

As set up on March 9, 1942, the Resources Division of the Services of Supply was a continuation of the activities and personnel previously known as the Resources Branch of the Office of the Under Secretary of War.

Before it was reconstituted, the Resources Branch of the Office of the Under Secretary of War consisted of seven principal divisions: Legal, Facilities, Standards, Strategic and Critical Materials, Steel, Materials, and Priorities. After March 9, the new Resources Division had ten branches: Legal, Facilities, Manpower and Liaison, Standards, Commodities, Power, Steel, Optical, Machine Tools, and Priorities. The Manpower and Liaison Division was transferred to the newly created Personnel Division of the Services of Supply on March 21, 1942. The Machine Tools Branch, Optics Branch, and Power Branch were made parts of the Facilities Branch, while the Steel Branch became part of the Commodities Branch. The Legal Branch was made a part of the administrative office.

The Resources Division operated as the Army side of the Army and Navy Munitions Board, on which the Under Secretary of War was the War Department's representative. The Division obtained from the Supply Services necessary information about production facilities and raw material requirements. In turn, these were cleared with the Navy before discussion with the War Production Board.

The legal office of the Resources Division acted as counsel for the Army and Navy Munitions Board and as legal adviser to the branches of the Division.

Facilities.—The Facilities Branch maintained a file of the principal industrial resources of the United States being used or available for use in the production of military supplies. During the past fiscal year, 4,681 new facility records were added to these files, and 2,731 facilities were dropped from the files. At the end of the year, the branch had a record of 13,703 productive facilities. Annually the branch published an alphabetical and geographical directory of industrial facilities.

The Fiscal Division, Services of Supply, referred applications for Certificates of Necessity requested for tax amortization purposes to the Facilities Branch for recommendation about the need for

expansion. Special studies were made about individual facilities and about the distribution of the war load by industries and by areas.

The Optics Section operated through the joint Optics Committee of the Army and Navy Munitions Board. It assembled data on requirements of the Armed Forces for optical material and made special efforts to expand the production of optical elements. As a result of its efforts, it was expected that with the new facilities shortly to be available all optical requirements would be met. The committee also helped the optical industry in meeting its two major problems—the need for trained workers for grinding and polishing lenses and prisms, and the need for metals to house optical systems.

The Machine Tools Section served as a central focal point to assist the Supply Services on the one hand in obtaining necessary tools, and the machine tool industry on the other hand in increasing production. As a result, many war producers were enabled to find and utilize available machine tools in meeting their own shortages.

Standards.—The Standards Branch of the Resources Division supervised War Department specifications and studied possible simplification of specifications and substitutions for critical materials. During the fiscal year 1942 approximately 1,200 Army specifications were reviewed and revised or approved. The total approved Army specifications by the end of the year numbered 4,820. In the effort to conserve materials about 425 specifications were canceled completely. The branch worked closely with the Specifications Executive Committee of the Procurement Division, Treasury Department.

Commodities.—During the past year the Commodities Branch, in cooperation with the Statistical Service, arranged for a complete recording on punch cards of critical raw material requirements in the Army Supply Program. This enabled the Deputy Chief of Staff for Requirements and Resources to present to the Requirements Committee of the War Production Board better information about War Department raw material needs. The Commodities Branch assigned specialists to sit with the appropriate branches of the War Production Board to advise in allocating materials like copper, aluminum, nickel, and steel plate to Army contractors. Special studies were made to conserve the use of aluminum, copper, mercury, tin, zinc, molybdenum, nickel, tungsten, and other ferro-alloys.

Priorities.—The Priorities Branch of the Resources Division provided the Army personnel for the priorities work performed by the Army and Navy Munitions Board. The Office of Production Management delegated to the Army and Navy Munitions Board responsibility for supervising the issuance of agreed-upon preference ratings to Army and Navy contractors.

By Priorities Regulation No. 11, on June 22, 1942, the War Production Board required all important metal users, whether war contractors or not, to operate under a Production Requirements Plan. By this plan it was expected to introduce quantity limits to materials that might be obtained under existing preference ratings.

Although entertaining reservations about the ability of the Production Requirements Plan to accomplish its objectives, the Services of Supply cooperated in the effort to make the plan work.

The Director of the Resources Division until June 30, 1942 was Brig. Gen. Charles Hines.

PROCUREMENT AND DISTRIBUTION DIVISION

The Procurement and Distribution Division was set up on March 9, 1942, as a staff division of the Services of Supply, to direct, supervise, and coordinate the procurement and distribution of supplies and equipment by the Supply Services. The Division combined work formerly done by the Procurement Branch of the Office of the Under Secretary of War and several sections of G-4. Four branches were created.

Legal Branch.—The Legal Branch served as staff adviser to the Supply Services on legal problems affecting procurement. The branch handled questions about patents, requisitions, and legislation. The branch passed upon the legal sufficiency of contracts referred to it by other staff divisions and by the Supply Services.

In cooperation with the Office of The Judge Advocate General the branch prepared and promulgated instructions about the application of State and local taxes to the War Department procurement program.

Purchases Branch.—A number of important changes in policy governing the procurement activities of the Supply Services were effected during the fiscal year.

Approval was obtained from the Director of Purchases, War Production Board, whereby contracts of the Supply Services would no longer be submitted before award to his office for clearance. After the outbreak of war, the Under Secretary of War delegated to the Chiefs of the Supply Services authority to approve all contracts for less than \$5,000,000. The Chiefs of the Supply Services were also authorized to dispose of scrap and obsolete and surplus equipment by negotiated sales, in order that scrap material might be more quickly returned to normal channels of trade.

Because of the tremendous increase in the money value and the number of purchases made by the Services of Supply, contracting officers, after April 9, 1942, were required to report to the Purchases Branch only contracts in excess of \$10,000.

The Purchases Branch endeavored to prevent duplication of effort

and competition between the Supply Services in the procurement of identical or similar supplies. On May 1, 1942, a Procurement Assignment Board was established in the branch to make a comprehensive study of duplications. As a result of its recommendations, the procurement of 179 items had been centralized in 1 Supply Service by June 30, 1942. The branch reviewed and approved all contractual documents involving a purchase cost of \$5,000,000 or more. Daily reports of contract clearances were made to the Under Secretary of War and weekly reports to both the Commanding General, Services of Supply, and the Under Secretary. During the period from March 9 to June 30, 1942, contracts amounting to more than \$7,500,000,000 were approved.

The Purchases Branch established a section maintaining continuous liaison with the Matériel Command of the Army Air Forces. Procurement regulations applicable to the Services of Supply were cleared through this office and thereupon made applicable also to the Army Air Forces. Contracts in excess of \$5,000,000 were cleared through the liaison office and acted upon by the Chief of the Purchases Branch.

In accordance with Executive Order No. 9127, issued on April 8, 1942, a Price Adjustment Board was created in the Services of Supply to renegotiate war contract costs where profits appeared excessive. Subsequently, the Congress of the United States in the Sixth Supplemental National Defense Appropriation Act of 1942 authorized the Secretary of War to require contractors or subcontractors to renegotiate contract prices and to withhold or recover any part of the contract price which was found to represent excessive profits. Thereupon, the Price Adjustment Board of the Services of Supply was redesignated the War Department Price Adjustment Board and empowered to serve as a coordinating agency of the department in renegotiating contracts. The chief of each Supply Service and the Commanding General, Matériel Command, Army Air Forces, established price adjustment sections to operate under the policies laid down by the Price Adjustment Board. Many contracts were renegotiated with resulting savings of hundreds of millions of dollars.

The general policies followed by the Advance Payments and Loan Section of the Fiscal Division were determined by the Purchases Branch.

The passage of the Price Control Act by the Congress and the subsequent issuance of price regulations made important changes in the procurement operations of the War Department. In consequence, the Office of Price Administration exempted a considerable list of combatant matériel from the general maximum price regulation. A careful study of the price problem made by the Purchases Branch led to the conclusion that the regulations of the Office of Price Administra-

tion might hamper Army procurement progress, but that the Supply Services should follow careful price policies in order to avoid inflation and excessive profits.

Considerable study was given to the preparation of legislation providing for payment of benefits to civilians for death, personal injury, or disability resulting from accidents in the performance of war contracts. Approximately 350 War Department projects were insured by the end of the year under the War Department Insurance Rating Plan.

Insurance arrangements for projects located outside the United States were complicated by jurisdictional questions about the application of United States or local laws to such projects.

Production Branch.—The Production Branch supervised efforts by the Supply Services to accelerate the output of matériel contracted for. Special studies were made of shortage items and recommendations made for the improvement of such situations. Production conferences were held bringing together officials from the Supply Services, War Production Board, and various divisions of Headquarters, Services of Supply, to consider specific production problems. These conferences proved to be a ready method of keeping everyone informed of specific difficulties encountered by the Supply Services.

As a result of the efforts of the Production Branch, a program was developed for conversion from steel to wood in the cargo bodies of motor vehicles. This program will save 75,000 tons of steel in 1942 and 350,000 tons during 1943. The branch also expedited the conversion of brass cartridge case production to steel cartridge cases with an estimated savings of 50,000 tons of copper in 1942 alone.

The Production Branch made studies of deficiencies in production management that were hindering output. Special efforts were also made to reduce the design details for various items which retarded production or consumed unnecessary quantities of scarce materials.

The Production Branch supplied the personnel for a Steatite Committee of the Army and Navy Munitions Board which rendered valuable assistance in the expansion of some 20 ceramic plants.

Distribution Branch.—The Distribution Branch was constituted from personnel of the Supply Branch of the G-4 Division of the General Staff. It supervised the maintenance of adequate quantities of equipment at depots and warehouses, and directed the utilization of depots by the General Depot Service and the Supply Services. It controlled the movement of supplies and equipment for troops within the United States and overseas, and supervised plans for the maintenance, repair, and salvage of equipment.

The Director of the Procurement and Distribution Division on June 30, 1942, was Brig. Gen. Charles D. Young.

OPERATIONS DIVISION

The Operations Division was established on March 9, 1942, to formulate plans for, to supervise, and to prepare orders about the military phases of the work of the Services of Supply.

A Troop Units Branch was set up to prepare Tables of Organization for various units under the Commanding General, Services of Supply, and to review Tables of Organization not under the control of the Services of Supply but necessarily affecting the problems of supply and equipment. The branch cooperated with the Army Ground Forces. The branch also cooperated with the Army Ground Forces in arranging for the activation of ground force units. By the end of the fiscal year the Branch had reviewed 256 different Tables of Organization and had issued orders for the activation of 176 separate service units with a total personnel of 1,500 officers and 33,000 enlisted men.

The Planning Branch prepared studies of requirements for Services of Supply units to serve forces in training in the United States, as well as to serve overseas forces. The branch prepared tentative schedules for dispatch of units overseas. It arranged for advanced shipment of cargo abroad, in order to take advantage of tonnage that might be available during a particular troop movement.

The Troop and Supply Movements Branch prepared orders for overseas movements of Services of Supply units, and followed up such orders to insure that the proper action had been taken. The branch also prepared orders for the movements of Services of Supply units within the United States.

The Supply Branch of the Operations Division was concerned with devising ways and means of getting necessary supplies and equipment into the hands of troops in the field with the least possible delay.

An Automotive Branch was responsible for developing and standardizing automotive equipment, for supervising technical aspects of all automotive publications, for approving automotive phases of Tables of Organization and Tables of Basic Allowances, for reviewing and initiating policies about automotive fuels and lubricants, and for promoting automotive conservation.

A Miscellaneous Branch dealt with a number of particular problems such as the disposal of surplus Civilian Conservation Corps property, and the coordination of the work of the War Department and the American Red Cross.

The Director of the Operations Division on June 30, 1942, was Brig. Gen. LeRoy Lutes.

MILITARY PERSONNEL DIVISION

The Military Personnel Division was set up on March 9, 1942, to advise the Commanding General about personnel functions which were Army-wide in scope. It supervised all military personnel operations within the Services of Supply.

In order to relieve the Army Ground Forces and the Army Air Forces, the Services of Supply established and operated a reclassification system. Officers considered unfit and improperly assigned by the Commanding Generals of the Army Ground Forces and the Army Air Forces were referred to the Services of Supply for appropriate action. Reclassification boards considered the case of each officer and took steps to reassign the officer to a position for which he was fitted or to remove him from active duty.

The Division carried on a continuous study of the methods of wartime promotion of officers. Changes in the system were worked out and put into operation. Study also was made of the problem of assigning newly appointed officers, or officers already in service, to positions where their talents and experience would be best utilized.

The Military Personnel Division supervised the activities of the officer candidate schools of the Supply Services. The enrollment in 19 such schools within the Services of Supply increased from 8,000 in March 1942 to about 39,000 as of June 30, 1942. It was expected that more than 100,000 new officers would be graduated by the end of 1942.

The value of an expanded Warrant Officer Corps to take over lesser administrative duties was recognized by the act of August 21, 1941. The Military Personnel Division made a study of officers in positions that could better be filled by personnel in the grade of chief warrant officer or junior warrant officer. The act authorized a permanent Warrant Officer Corps and temporary appointments to meet wartime Army requirements. The Warrant Officer Corps was increased from about 600 in 1940 to approximately 4,500 on June 30, 1942.

The Military Personnel Division supervised the operation of all induction and reception centers in the United States. These induction and reception centers were administered directly by the corps areas. All selectees for the Army as a whole passed through reception centers after they were officially inducted. Here the selectee was clothed, classified, and began his training. Selectees were inducted into the service immediately upon being found physically acceptable for duty with the armed forces. They were allowed a maximum of 14 days in which to straighten out their personal affairs before beginning active duty. During June 1942, a test in-

duction of 1,000 selectees in Class 1B was conducted to determine whether persons physically able to perform limited service only might be effectively utilized.

The expansion of the Army made necessary the establishment of a system of classification for both officer and enlisted personnel at the time of induction or appointment that enabled assignment to positions where previous experience and natural abilities could best be utilized. The classification system was operated by The Adjutant General's Office.

One of the first projects attempted by the Classification Division of that office was classification of about 5,000 candidates for commissions graduating from the Reserve Officers' Training Corps in the spring of 1942. As a result of this classification, more than 1,200 candidates were transferred from the arm or service in which they were to be commissioned to an arm or service where their particular skills were more needed.

A study was started of assignment methods of inducted men from reception centers to replacement training centers. Every effort was made to avoid a waste of manpower through improper assignment. On June 16, 1942, a new law was approved providing pay and allowance increases for enlisted men, warrant officers, nurses, and second lieutenants, with some increases and allowances for other officers. The Military Personnel Division also presented information to Congress during its consideration of the dependency benefits bill which became law on June 23, 1942. The Division assisted the legislative consideration of the bill establishing the Women's Army Auxiliary Corps.

Because of the need for special technical assistance in the maintenance and repair of automotive equipment used by the Army, the Military Personnel Division took the lead in conducting a test in which civilian automotive advisers were employed and assigned to divisions of the Army Ground Forces.

A number of improvements were made in centralizing and simplifying the procedures for the appointment of officers in the Army of the United States by the Supply Services. Branch offices were established in each corps area, with district offices in given cities. A pool of applicants was established. The actual program was operated by The Adjutant General.

The Military Personnel Division developed a plan for the voluntary enlistment of male students in universities, colleges, and junior colleges in the Enlisted Reserve Corps of the Army.

The Director of the Military Personnel Division on June 30, 1942, was Brig. Gen. James E. Wharton.

CIVILIAN PERSONNEL DIVISION

The Civilian Personnel Division was organized March 9, 1942, to develop policy and supervise the personnel administration of the various Supply and Administrative Services and of the corps areas; to develop policy on and supervise labor relations; and to handle the various War Department labor supply problems.

The objectives of the Civilian Personnel Division were to assure a sound and uniform policy for the Services of Supply in dealing with the manifold problems involved in efficient utilization of the hundreds of thousands of workers directly employed by the Services of Supply, and to use the resources of the War Department to insure that the millions of persons employed by War Department contractors were utilized to greatest possible advantage. To perform these tasks the Division was divided into three branches.

Civilian Personnel.—As an initial step in laying the foundation for a complete and thorough personnel program, two intensive surveys were undertaken in Cincinnati and New York City in order to learn about existing practices and to propose improvements. About the same time a Civilian Personnel Policy Committee was created, with representatives from each of the Supply Services, and was charged with responsibility for reviewing and preparing recommendations on personnel policies and practices. It was found that personnel administration was conceived largely as a job of handling necessary Government routines and that little time or effort was devoted to the development of the tools of personnel administration.

A system of wage administration for field services was developed to end inequalities of wage scales between the Army establishments in the same area and to erase much of the differential between these wage scales and those of local industry. An induction program for the proper orientation of new employees was introduced, and an exit interview technique developed with a view to reducing labor turnover. An effort was made with the assistance of the Training-Within-Industry Group of the War Manpower Commission to supplement existing training activities of the Supply and Administrative Services and of the Office of the Secretary of War. Standard employee relations techniques were established. Considerable planning was done for the standardization of personnel organization and procedure throughout the Services of Supply.

In June 1942, there were some 650,000 civilian workers employed by the Services of Supply, or 85 percent of the total civilian workers employed directly by the War Department. About 155,000 were employed under the corps areas, of which 20 percent were skilled, 25 percent clerical, and 5 percent professional workers.

Labor Relations.—Prior to March 9, 1942, a Labor Relations group in the Resources (Planning) Branch of the Office of the Under Secretary of War, together with a special labor consultant to the Secretary of War, had served as the liaison between the War Department and the governmental agencies whose task it was to prevent and settle labor disputes threatening to interfere with war production. This work became a part of the Civilian Personnel Division. The War Department helped to effect a reduction in strikes through cooperation with other agencies of the Government, and in many cases ended or prevented stoppages by making the proper representations to employers and to labor organizations.

Under the newly organized Civilian Personnel Division, labor relations activities were of two types. One was to assist the several Supply Services in the development of staffs and labor relations policies that would make possible the avoidance of labor disputes. These policies insured an opportunity for organized labor to participate more fully in the war production program. Another activity which averted many serious stoppages was direct work with labor groups and with managements.

Manpower.—By the beginning of the fiscal year 1942 previous surpluses of labor were largely absorbed. Proceeding in accordance with the Industrial Mobilization Plan, the Resources (Planning) Branch of the Office of the Under Secretary of War increased its activities to assure an adequate supply of qualified labor for war production without interfering with the orderly fulfillment of military mobilization plans. Major attention was given to working with the National Labor Supply Committee.

In September 1941, War Department participation was extended to the newly established field organization of the National Labor Supply Committee. Officers representing the Office of the Under Secretary of War were assigned to work with and to serve as a member of each of the twelve regional committees. Under authority of a memorandum of August 28, 1941, from the Under Secretary of War, the Resources Branch and its liaison officers were given direct responsibility for aiding the Supply Arms and Services in obtaining an adequate supply of labor and for representing their interests in the general labor supply program. This centralization did not supplant the labor procurement work of the several Supply Arms and Services or remove their responsibilities for meeting their problems.

The field organization was composed of the liaison officers who were assigned during the previous year to serve with the Selective Service System as State Occupational Advisers. With the advent of war the duties of these officers were intensified.

Coincident with the development of the Labor Supply Committee

program, the problem of deferment from military service of key men in industry became more critical. The liaison officers provided advice on deferment problems and educated employers to the necessity of providing replacements for persons subject to military duty. These officers strongly advocated major reliance upon women for expansion in plant forces.

The problem of deferment from war service of Reserve officers who were key men in industry also became important. Requests for the retention of officers were handled on an individual case basis. Similar action was also taken for enlisted men.

After its creation the Civilian Personnel Division worked in close cooperation with the War Manpower Commission. The Division worked also with the older agencies of Government which were concerned with labor supply policy and problems. Special emphasis was placed on the improved utilization of labor by the Army.

The Civilian Personnel Division endeavored to provide positive guidance to the Supply Services which would lead to a more equitable distribution of contracts. Information on areas of labor shortage and labor surpluses was made available.

At the end of the year a program which would lead to the provision of basic training for civilians to insure an adequate supply of specialized personnel for the Army was being developed.

Army military needs for manpower and Army needs for civilian workers had to be correlated.

The Director of Civilian Personnel on June 30, 1942, was James P. Mitchell

TRAINING DIVISION

The Training Division established and supervised the training program in reception centers, replacement training centers, officer candidate schools, and schools for units of the Services of Supply.

The division developed and reviewed training doctrines for all types of service units. It directed the preparation of those portions of tactical and technical publications containing these doctrines, including Field Service Regulations, Field and Technical Manuals, Training Circulars, Army Extension Courses, Training Films, Film Strips, and other training aids.

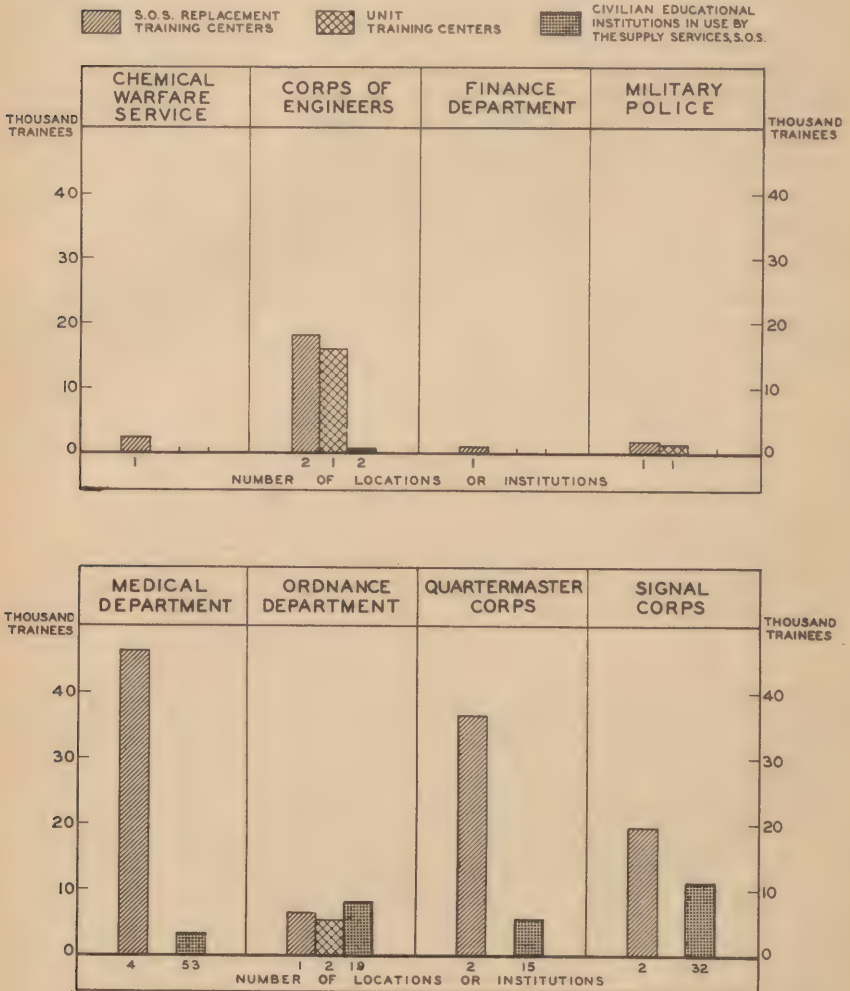
Except for doctrine, the division supervised the operation of the Command and General Staff School and the United States Military Academy.

On June 30, 1942, within the Services of Supply there were 78 Army controlled and operated special service schools, with a peak load capacity per course of 71,724 students; 14 Services of Supply replacement training centers with a total capacity of 132,354 trainees; 4 unit train-

ing centers with a total capacity of 22,570 trainees; and 121 civilian educational institutions in use by the Supply Services, with a total yearly capacity of 29,112 trainees.

CHART VII

YEARLY CAPACITY AND NUMBER OF SCHOOLS, JUNE 30, 1942:



Brig. Gen. Clarence R. Huebner was the Director of the Training Division.

FISCAL DIVISION

The Fiscal Division was created to consolidate the work of the Chief of Finance as Budget Officer of the War Department; the work of the Fiscal Branch of the Supply Division of the General Staff; the work

of the Accounting, Finance, and Tax Amortization Divisions of the Administrative Branch, Office of the Under Secretary of War; the work of the Budget and Legislative Planning Branch in the Office of the Chief of Staff; and the work of the Budget Advisory Committee of the War Department. The Advance Payment Section of the Procurement and Distribution Division was transferred to the Fiscal Division on April 8, 1942.

Before the end of the fiscal year considerable strides had been made in the improvement of War Department budgetary procedure. The preparation of estimates was accelerated by working out improved budgetary relationships with the individual Supply and Administrative Services. The number of items for which appropriations were made was reduced from 586 to 195. The system of allotments to operating agencies was simplified. The number and the corresponding accounts were greatly reduced. For example, Quartermaster allotments were reduced from 6,800 to approximately 100 for the fiscal year 1943, and those of Ordnance from approximately 13,500 to some 1,000. Appropriations were consolidated by reduction of titles. This step alone reduced by three-fourths the number of accounts to be maintained. Interdepartmental procurement was simplified and hundreds of fund transactions eliminated.

A uniform definition of accounting terms was framed by the Office of the Under Secretary of War and put into effect after March 9, 1942.

Arrangements were made for the General Accounting Office to conduct post audit of cost-plus-a-fixed-fee contracts at the office of the contractor, utilizing contractor's records held at the contractor's plant subject to disposition by the General Accounting Office. This procedure was initiated with certain selected contractors. Such a procedure reduced the number of copies required to support reimbursement vouchers from three to one, and saved much clerical work and mailing costs. Moreover, questioned items were thus disposed of on the spot.

Steps were taken to improve and standardize administrative audit procedures throughout the Services of Supply. Instructions by the various services to field establishments on accounting, auditing, and fiscal procedures were approved by the Fiscal Division. It served as a central clearing house for all questions about contracts. Negotiations were carried out clarifying the question whether subcontractors' fees were to be considered a cost or a part of the contractor's fee in cost-plus-a-fixed-fee contracts.

The Fiscal Division made studies of the financial operations of the Army Exchange Service and Army Motion Picture Service, and of the Army Emergency Relief Fund.

Under existing regulations and procedure, field procurement offices

of the Supply Services made advance payments on contracts up to 50 percent of the contract price, provided it did not exceed \$5,000,000 and no substantial deviation from the prescribed form of agreement was involved. These advances were later reviewed. Advance payments not coming within the authority of field offices were made with the specific approval of the division.

On March 26, 1942, the President, by Executive Order No. 9112, authorized the Army, Navy, and Maritime Commission to make, participate in, or guarantee loans financing a contractor or subcontractor engaged in war operations. The Federal Reserve Banks were authorized to act as agents of the services in carrying out the provisions of the order. The power of the Secretary of War to authorize such loans was delegated to the Director of the Fiscal Division, Services of Supply.

The Fiscal Division was responsible for the issuance of certificates of necessity for plant expansions that would permit war contractors to deduct 20 percent of the cost as depreciation in income tax returns.

The Fiscal Division, on June 30, 1942, consisted, in addition to a Legal Section and an Administrative Section, of three main branches: a Budget Branch, an Accounting and Audit Supervisory Branch, and a Miscellaneous Branch made up of the Tax Amortization Section and the Advance Payment and Loan Section. The Director of the Division was Brig. Gen. A. H. Carter.

SUPPLY SERVICES

ORDNANCE DEPARTMENT

The Ordnance Department developed, designed, manufactured, bought, stored, and maintained ordnance matériel, and trained ordnance personnel for field duty. Its responsibility covered the whole catalogue of Army weapons and ammunition from sidearms, rifles, carbines, and machine guns, to light and heavy field artillery, coast artillery, antiaircraft artillery, and antitank artillery. The Ordnance Department also developed and procured tanks, combat vehicles of all kinds, and self-propelled mounts. Finally, there was ammunition to provide.

Ordnance Department appropriations for the fiscal year 1940 were over \$130,000,000, of which some \$63,000,000 were expended in that year. In 1941, appropriations were nearly 3 billion dollars and expenditures over \$400,000,000. In the fiscal year ending June 30, 1942, appropriations were more than 21 billion dollars and expenditures over 2½ billion. All these sums were exclusive of Lend-Lease funds and money transferred from other departments.

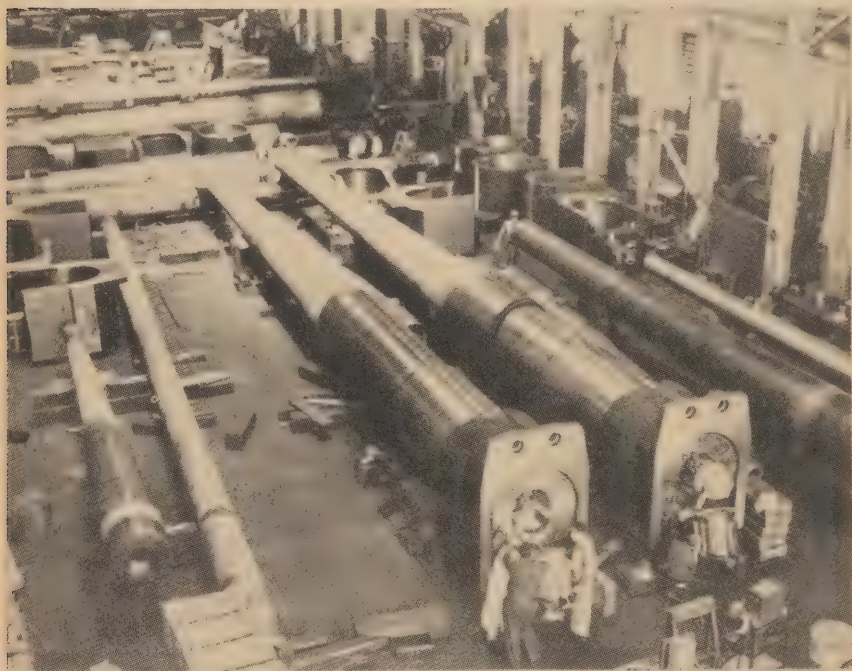
The Ordnance Department had to obtain complete fighting equipment not commercially produced in the ordinary course of American manufacture. When conditions of national emergency and then of war multiplied many times the demand for weapons over peacetime production, it was necessary to build new plants, to make and install new machine tools in new production lines, to design new assembly procedures, and to train new labor.

Much attention was given to the possibility of converting production lines making peacetime goods to the manufacture of ordnance matériel. In order to facilitate the change-over, display services were established showing prospective manufacturers completed specimens of various types of ordnance items. By seeing the particular item which he might produce, many a manufacturer was able to visualize better, and to solve with the assistance of his ordnance district office, the conversion problems before him. As a result, toy manufacturers produced canister, and former automobile dealers hand-grenade fuzes. Meter companies turned out shells and primers. A bedding company made links for machine-gun belts. A company formerly making burial vaults turned out 100-pound bombs.

Efforts were made during the year to include in the war program manufacturers who thought their equipment was not fitted, even re-

motely, for war production. For example, a textile mill which was world renowned for its textile machinery began production of carriages for antitank guns. Also, there was the case of a pressing machine company which began to turn out high-explosive shells by the thousands.

At the beginning of the fiscal year 1942 the organization of the Office of the Chief of Ordnance was divided into four major groups: the General Office, the Ordnance Committee, the Industrial Service, and the Field Service. The General Office performed executive and ad-



ministrative duties common to all activities; it consisted of fiscal, civilian personnel, military personnel and training, war plans, plant security, and administrative divisions.

The Ordnance Committee was made up of a group of Ordnance Department representatives and representatives of various arms using Ordnance matériel. The committee considered and made technical recommendations about standardization and development of weapons.

The Industrial Service was responsible for the design, development, and procurement of all weapons and combat vehicles. The service had four major operating divisions: Ammunition, Artillery, Tank and Combat Vehicles, and Small Arms.

The fourth group of ordnance activities was the Field Service, responsible for the storage and issue of ordnance matériel and of the

inspection, repair, and maintenance of ordnance matériel in the hands of troops.

Each of the three major groups into which the Ordnance Department was organized had various field installations under its jurisdiction. The General Office directed training centers; the Industrial Service directed manufacturing arsenals, proving grounds, new manufacturing facilities, and the procurement district offices; the Field Service had charge of ordnance depots.

Before the end of the fiscal year a major reorganization of the Ordnance Department took place. The General Office was broken down into a number of branches which were recognized as staff agencies of the Chief of Ordnance. These branches were legal, fiscal, military personnel, civilian personnel, war plans and requirements, plant security, safety, administration, executive and control. The Ordnance Department was then divided into five operating units: the Technical Division, in charge of research and development work for all ordnance matériel; an Industrial Division, responsible simply for the procurement of weapons; a Military Training Division; a Parts Control Division, for establishing spare parts policy, directing procurement of spare parts by the Industrial Division, and controlling the issuance of spare parts by the Field Service Division; and the Field Service Division to store, issue, and maintain ordnance matériel.

Development.—A great deal has been done to provide American and United Nations soldiers with the finest weapons possible. In the small-arms field, the Garand rifle, developed over a period of 20 years at the Springfield Armory, has received the acid test of warfare.

The Garand was simple to operate and possessed relatively few parts, comprising but 72 components as against 92 for the Springfield, despite the fact that the rifle was semiautomatic. It was probably the easiest military semiautomatic yet developed to disassemble.

To supplement the Thompson submachine gun already in use in the service, the "Reising" gun was adopted. This was a lightweight weapon which, like the Thompson, fired the standard caliber .45 automatic pistol cartridge so long used in the service. It was capable of both semiautomatic and automatic fire. Simple in design, it operated on the conventional delayed-blow-back system. The development of this specialized weapon gave the American parachute trooper the fire power which experience has shown to be necessary, and the fire power has been given him in a compact form not previously available in a weapon firing the caliber .45 piston cartridge.

To increase the defensive and offensive power of those enlisted men heretofore armed with pistols or revolvers, and of combat officers below the grade of major, the Ordnance Department standardized, after exhaustive tests of various specimens, a new caliber .30 carbine.

In the field of tanks, the Ordnance Department evolved a fire-control device increasing the accuracy of fire from a moving tank by 500 per cent. Tank contours were rounded to reduce the chance of direct hits and the formerly riveted construction was replaced with welds and castings. The first M1 heavy tank, with a weight approaching 60 tons and a 2,000-horsepower power plant, was delivered during the year. Tank weapons were generally increased in power and in armor thickness. A new menace to the tank was produced by the Ordnance Department in the form of self-propelled artillery known as tank destroyers.

To its already formidable array of antiaircraft weapons, the Ordnance Department added two new types during the year. One, of European origin, was redesigned and simplified for American manufacture.

In line with its program to conserve critical materials as far as possible, the Ordnance Department during the year undertook the experimental production of steel cartridge cases for artillery ammunition to replace the brass cases previously in general use. Results were successful and early in 1942 a change-over from brass to steel was begun. Similar experiments were undertaken for small-arms ammunition.

The Ordnance Department has found it possible to conserve large amounts of critical and strategic materials by the employment of synthetic resins or plastics as substitutes for metal components.

Conservation of materials.—The Ordnance Department foresaw early in the war production program a need for conserving materials. It initiated a survey of the aluminum, magnesium, nickel, and zinc content of all fighting weapons. Engineering studies were also made to substitute other materials for rubber, antimony, tin, copper, steel, textiles, paper, and paint. In all these studies, the primary consideration was to effect conservation without sacrificing the safety of the soldier who used the weapons or to impair his military efficiency in any way.

A centralized authority in the Ordnance Department known as the Conservation Section was created to control the conservation and application of critical and strategic materials. To assist in the conservation of materials the services of specialists were obtained. In addition, several technical organizations served in a consulting capacity. Various advisory, engineering research, and technical committees, operating under the general jurisdiction of various Ordnance committees, contributed their advice and knowledge to the program.

Production.—The production problems of the Ordnance Department have been numerous. Each has required individual study to reach a proper solution. Among the means used to increase production have been—

a. Expansion of production in present Ordnance facilities by—

- (1) Increasing the number of hours worked.
- (2) Obtaining additional machine tools to overcome bottlenecks.
- (3) Complete duplication of production lines.
- (4) Physical expansion of existing plants.
- (5) Increased efficiency, resulting from—

(*a*) Increased production per employee after the individual acquired familiarity with his job.

(*b*) Technical assistance rendered by Ordnance district production experts.

(*c*) Increased interest in work on part of employee.

(6) Conversion of an increased percentage of plant capacity to ordnance manufacturing.

b. The addition of new facilities by—

- (1) New construction.

(2) Review of plant surveys and machine tool lists to find new suppliers.

(3) Arrangements for grouping or "pooling" plant facilities.

(4) Contracting with manufacturers no longer able because of material shortages to produce their previous commercial line.

The six manufacturing arsenals of the Ordnance Department have been much expanded since 1940. In addition, many new plants have been built at Government cost for operation under private management contracts.

Most ordnance procurement, however, was obtained not from manufacturing arsenals or from Government-owned and privately managed plants, but rather from industrial establishments that had converted to ordnance production. The Ordnance Department had 13 procurement district offices contracting with private manufacturers for ordnance matériel. These district offices were located in Boston, Springfield (Massachusetts), Rochester, New York City, Philadelphia, Birmingham, Pittsburgh, Cleveland, Detroit, Cincinnati, Chicago, St. Louis, and San Francisco. These districts controlled altogether 48 suboffices in as many cities.

The policy of encouraging manufacture by subcontractors had been carried to such an extent by the Ordnance Department that in many instances by the end of the year the prime contractor was producing a minimum of components for the finished product.

At the close of the year the various ordnance districts were inspecting 4,803 prime contracts and 28,781 subcontracts, with 40 per cent of the prime contracts covering products not susceptible of manufacture through subcontractors.

The present system of ordnance procurement districts, established 20 years ago, has demonstrated its efficiency during the present emer-

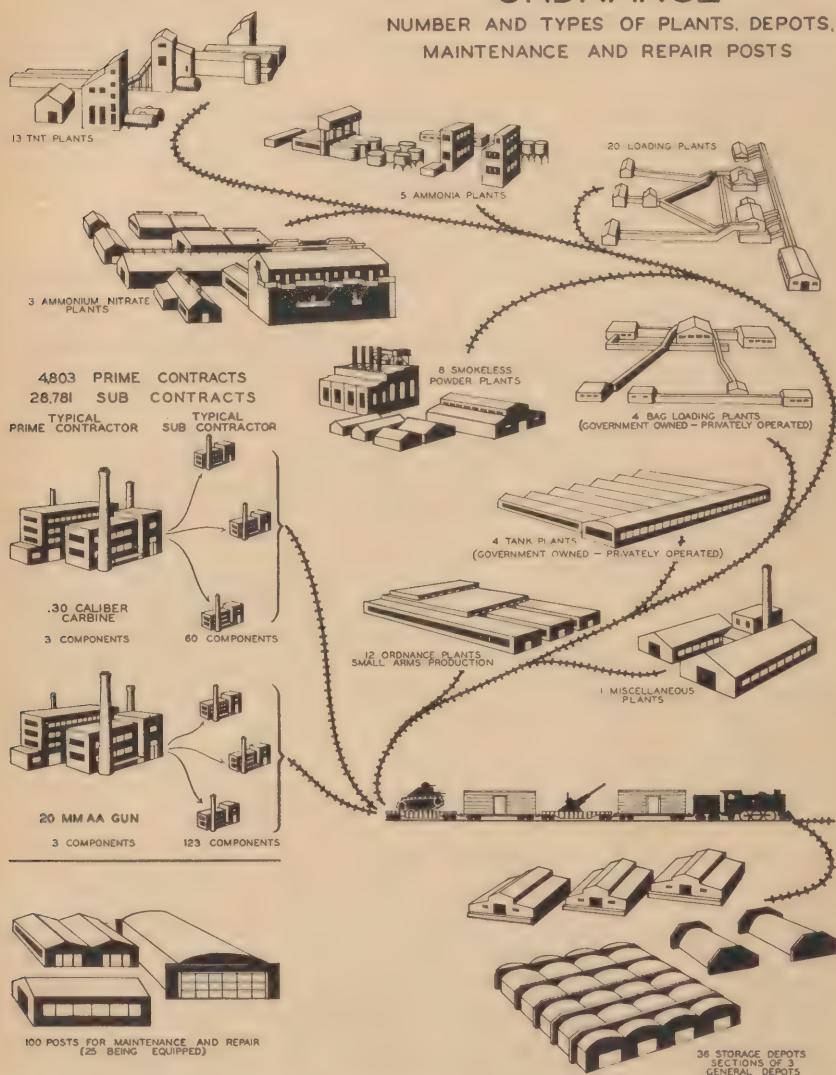
gency. The ordnance districts have been able, with the expansion required by the volume of business, to handle the load.

Field service.—The expansion of ordnance procurement necessarily led to a corresponding increase in depot requirements for the storage of

CHART VIII

ORDNANCE

NUMBER AND TYPES OF PLANTS, DEPOTS,
MAINTENANCE AND REPAIR POSTS



weapons and ammunition. By the end of the fiscal year the Ordnance Department was operating 36 depots, and had at its disposal sections of three general depots for storage of ordnance matériel.

More than 100 ordnance posts in the continental United States were

equipped to carry on all maintenance and repair functions for which they were responsible, and more than 25 additional posts were in the process of being equipped.

Approximately 20 different types of technical assembly vehicles had been designed for repair and maintenance work in theaters of operations.

A large Continental Base Shop was laid out at one ordnance depot and construction was well under way by the end of the fiscal year. This base shop would be capable of heavy maintenance, including complete overhaul of tanks and other combat vehicles, artillery, and small arms.

The Field Service Division had also undertaken the procurement and assembly of battalion sets of equipment for the major overhaul of every item of ordnance.

Military training.—The Ordnance Training Command included among its installations at Aberdeen Proving Ground, Md., the Ordnance School with one division for officers and another for enlisted specialists. Also at Aberdeen Proving Ground were located an officer candidate school, a replacement training center, and unit training centers. In addition, the Ordnance Training Command maintained unit training centers created during the year at Flora, Mississippi; Camp Perry, Ohio; Raritan Arsenal, N. J.; and Camp Sutton, N. C.; plus several large branch schools at other posts, supplemented by courses of instruction for military personnel in some 30 industrial establishments.

From reception centers enlisted men were sent directly to the ordnance replacement training center where they are given an intensive course in basic military training. Those who had a mechanical background in civil life were given advanced technical training in appropriate specialties while the others received elementary technical training designed to make helpers.

The officer candidate school received soldiers who had at least 3 months' service and who had shown intelligence and leadership.

Five Ordnance unit training centers were equipped to give basic military, basic technical, and advanced technical training. The course of training at these unit training centers covered the whole field of Ordnance supply and maintenance, with particular emphasis on teaching the trainees to work as a unit.

Ordnance training facilities expanded greatly during the fiscal year. The capacity of the replacement training center at Aberdeen alone increased from 4,000 to 8,000 enlisted men. That of the officer candidate school expanded from 50 to 3,500 for each 3 months' course. At the end of the year candidates for the officers' training course were enrolled weekly, instead of at 3-month intervals as at the beginning of the year.

During the past year the Ordnance Department produced film strips on small arms, aircraft cannon, and light field artillery, including separate strips on the Springfield rifle, the Garand rifle, the Browning caliber .50 water-cooled machine gun, the 37-mm gun, the 20-mm gun, the 75-mm gun and carriage, and the 105-mm howitzer. Film strips and training films were used extensively as teaching aids in the schools and training centers of the Ordnance Department.

The number of Ordnance training establishments where training was carried on by military personnel increased from 6 to 10 during the fiscal year.



Affiliated units.—The importance of base maintenance, and the realization that base regiments were the most efficient type of organization to handle the multifarious communications zone maintenance and supply problems led to the authorization by the War Department of two Ordnance regiments (base) on March 14, 1942. The activation of base regiments such as these would enable the Ordnance Department to fulfill all its base shop missions.

The creation of these base regiments filled a gap that had been too apparent to officers concerned with the problem of giving the best possible service to the fighting forces.

Since the first two base regiments were to be trained and available for oversea duty by the end of the fiscal year, ordinary recruiting

channels were inadequate to obtain the type of men desired within the time allotted. The National Automobile Dealers' Association was invited to sponsor recruitment of the necessary officers and enlisted men. This invitation was accepted and the association obtained the required number of volunteers.

This sponsorship of affiliated units was extended to recruitment of Ordnance battalions and companies. The assistance of other sponsors, in addition to the National Automobile Dealers' Association, was obtained.

The number of officers in the Ordnance Department increased from 2,780 at the beginning of the fiscal year to 5,026 on June 30, 1942. Authorized enlisted strength advanced from 18,035 to 78,705 men.

Civilian personnel.—Civilian personnel employed in the Office of the Chief of Ordnance and at all establishments under his jurisdiction, including the Ordnance procurement districts, manufacturing arsenals, field service arsenals and depots, Ordnance works and plants, proving grounds, and in the various corps areas and at other stations, grew from 68,533 on July 1, 1941, to 186,707 on June 30, 1942.

To meet the steadily increasing need for trained civilian personnel at Ordnance establishments, the civilian training program of the Ordnance Department was expanded. The facilities of Ordnance establishments were used for the training of Ordnance and contractor personnel. The size of this personnel training program was indicated by the number of personnel trained during June 1942. In this one month approximately 16,000 civilians were trained at Ordnance-owned establishments.

Chief of Ordnance.—Major General Levin H. Campbell, Jr. succeeded Major General Charles M. Wesson as Chief of Ordnance on June 1, 1942.

THE QUARTERMASTER GENERAL

The Quartermaster Corps obtained and delivered the food, clothing, equipage, and fuel needed by the Army, and furnished the noncombatant motor equipment. It developed new items and studied the improvement of those in use. Because of widely varying climatic conditions and differing methods of warfare, a large catalogue of supply components was required and many warehouses and depots were necessary for storage and distribution. The expenditures of the Quartermaster Corps were more than 7 billion dollars in the fiscal year 1942, contrasted with 3 billion dollars in 1941 and 250 million dollars in 1940.

The administrative organization of the Office of the Quartermaster General was modified and several functions reassigned during the fiscal year. Construction activities, including the construction of camps and barracks for the Army, formerly assigned to the Construction Division, Office of the Quartermaster General, were transferred to

the Office of the Chief of Engineers by an Act of Congress approved December 1, 1941. The Transportation Division was transferred to the Transportation Service upon creation of the Services of Supply on March 9, 1942. A reorganization and reassignment of functions of the remaining services of the Office of the Quartermaster General were effected by an office order of March 31, 1942.

In the reorganization of the Office of the Quartermaster General the previous primary basis of division of duties according to types of goods purchased, such as clothing, equipage, and subsistence, was replaced by a primary division based upon functions such as procurement, production, and distribution. The one exception to this was the continuance of the Motor Transport Service as a separate major assignment of work. The overhead organization in the Office of the Quartermaster General was simplified.

On June 30, 1942, the Office of the Quartermaster General consisted of an administrative and advisory staff and six operating services: procurement, production, storage and distribution, motor transport, military, and installations.

Administrative and advisory services.—After March 31, 1942, there were nine administrative and advisory services in the Office of the Quartermaster General. The chief of General Administrative Services had charge of office management and office service. Public Relations issued special articles and photographic releases, arranged exhibits, and prepared radio material about the work of the Quartermaster Corps. The Intelligence Service obtained information about the operation of foreign armies through intelligence channels and made efforts to get actual samples of clothing and equipment used in foreign armies.

An Organization Planning and Control Division was set up on March 31, 1942, to study management and procedures in the Office of the Quartermaster General. The Division also collected, interpreted, and disseminated statistical information about the activities of the Quartermaster Corps.

An Inspection Division was established on March 31, 1942, to supervise the inspection of plants for observance of necessary precautionary measures against accident and sabotage.

During the fiscal year 1942 a new accounting system was developed by the Fiscal Division to bring about more adequate control over the status of funds. A new branch was set up to coordinate accounting policies and procedures of the Quartermaster Corps, to supervise auditing and accounting, and to tabulate and analyze fiscal statistics. Another new branch was established to analyze cost of contract prices.

The Military Personnel and Training Division supervised the procurement and training of officers and men for Quartermaster units. The Quartermaster Corps grew during the fiscal year 1942 from 6,038

officers and 78,336 enlisted men to 12,243 officers and 245,164 enlisted men.

The Training Branch supervised the educational and training program under the jurisdiction of the Quartermaster General. In the replacement training centers, enlisted trainees increased from about 9,000 each at Fort Warren and Camp Lee to 13,500 and 16,500, respectively. In addition to the bakers and cooks schools in each corps area, a number of subschools were established. The Holabird Motor Transport School was the only Quartermaster Motor School in July 1941. During the year, the Atlanta Quartermaster Motor Transport School, Normoyle Motor Transport School, Stockton Motor Transport School, Fort Crook Motor Transport School, and Fort Devens Motor Transport School were established. Arrangements were made with four mechanical training institutions located at Bloomington, Ill.; Memphis, Tenn.; Nashville, Tenn.; and Los Angeles, Calif., to train Quartermaster troops, and these schools were training over 1,000 men each 4-week training period.

Civilian Personnel Affairs of the Office of the Quartermaster General directed civilian personnel functions within the Quartermaster Corps. It arranged for appropriate training, promulgated policies and procedures affecting the departmental and field administration of civilian personnel, and maintained liaison with the Civilian Personnel Division of the Services of Supply and the Civil Service Commission. At the beginning of the fiscal year 1942 there were 5,740 employees in the departmental service and 108,282 employees in the field service. On June 30, 1942, there were approximately 4,990 civilian employees in the departmental service and approximately 133,848 civilian employees in the field service.

The International Division directed all phases of the Lend-Lease Program within the Quartermaster Corps. The division provided a central channel for the clearance of transactions and reports and the processing of request for aid. It coordinated Lend-Lease requirements with United States requirements.

During the fiscal year 1942 Quartermaster supplies and equipment were furnished to four United States military missions, to the Army Air Forces, and to other services as component parts of their Lend-Lease requisitions.

Production Service.—One of six operating divisions, the Production Service was set up on March 31, 1942, to perform the procurement planning activities of the Office of the Quartermaster General. It operated through two major divisions.

The Requirements Division edited and suggested changes in the Quartermaster sections of Tables of Basic Allowances for all Arms and Services. It computed the over-all supply requirements for the Army Supply Program and made computations for all special task

forces sailing for overseas destinations. It reviewed the Quartermaster portion of the Army Supply Program in order to initiate such adjustments as might be required.

The Resources Division translated military requirements into terms of raw materials and production facilities. It studied how these requirements might be met in terms of time and quantity and prepared recommendations for fulfilling the Quartermaster Corps supply program.

One branch had charge of planning and directing research and development studies on Quartermaster supplies and equipment. Much of this work was done with the cooperation of the National Defense Research Committee and the Committee on Medical Research.

During the fiscal year, 189 development projects were completed, ranging from the development of clothing and equipment of the Army, Women's Army Auxiliary Corps, Army Specialist Corps, and all of the special combat troops, to the redesigning of all possible items of Quartermaster issue in order to conserve critical materials and increase functional utility.

Procurement Service.—The second of the six principal operating services of the Quartermaster General, the Procurement Service, was set up on March 31, 1942, to centralize the direction of purchasing activities. A number of important changes in procurement methods occurred during the year. Because of the contract distribution policies favored by the Office of Production Management, an effort was made to award contracts to as many producers within a region as possible. Special consideration was given to companies in distressed areas. Although 60 percent of the new contractors were delinquent in meeting delivery schedules, many new sources of supply were discovered. Local procurement officers were delegated the full authority of the Quartermaster General to make awards without prior approval.

The Purchase Division of the Procurement Service directed and supervised the purchase of supplies for the Quartermaster Corps except motor vehicles, tools, repair parts and accessories, and subsistence. It was charged with the procurement and ultimate delivery to Quartermaster Corps receiving depots or installations of all wool and cotton textiles, fabricated clothing, equipage, and general supplies items; it purchased fuel and forage for the Office of the Quartermaster General, and for other arms and services when procurement was consolidated by direction of higher authority.

The bulk of actual purchasing was performed through depots located in Boston; Jersey City; Philadelphia; Baltimore; Atlanta; Jeffersonville, Ind.; Chicago; Kansas City; San Antonio; Seattle; and San Francisco.

A Priorities Branch in the Procurement Control Division directed priorities policy in Quartermaster procurement. It dealt with the Services of Supply, the Army and Navy Munitions Board, and the War Production Board in clarifying priorities policy.

A Labor Branch investigated and reported on the strikes, walk-outs, lock-outs, or threatened strikes that might hamper Quartermaster procurement. The branch kept in touch with Headquarters, Services of Supply, the Labor Department, and contractors for the avoidance of work stoppages. It represented the interests of the Quartermaster Corps in strikes and labor disputes.

A Legal Division furnished all required legal advice and services to the Quartermaster General and rendered legal counsel to the Quartermaster Corps.

In May, a plan was approved for the Quartermaster General to procure and issue uniforms for officers. The Army Exchange Service was to fix the price and have charge of the distribution.

Storage and Distribution Service.—The Storage and Distribution Service had charge of the maintenance of supplies at depots and the issuance of supplies to troops. It also purchased office equipment and supplies and supervised the purchase of subsistence rations, fuel, and heavy equipment.

The service maintained fifteen depots stocked with a full line of the principal items of clothing and equipage issued in the distribution area assigned to it. Distribution factors changed with every change in troop location. A size tariff had to be established for every item. The distribution of clothing by size represented continuous study of issues to enlisted men upon induction.

Much attention was given to improvements in the packing and shipping of supplies in order to conserve shipping space, to effect economies, and to speed up deliveries.

Several types of field rations were developed during the year for use by field forces, paratroops, and the air forces. Certain commercial foods were reconstituted during the year, including two types of stabilized butter and soluble coffee. Packaging was improved to withstand water shipping and unprotected storage.

The market center system for supply of perishables to posts was expanded, and operating headquarters was established in Chicago.

Under the canned goods purchasing program, a War Production Board order reserved stated percentages of the pack for Government use; War Production Board, Army, Navy, Maritime, and other officials worked together to procure the goods as efficiently and rapidly as possible.

Increasing Army consumption of food required standardization of menus in the zone of the interior. Standard menus were worked out

and sent to all corps areas where they were used increasingly by individual commands.

The procurement, storage, and handling of coal, liquid fuel for heating and automotive purposes, gasoline, warehouse equipment, and bakery equipment were also handled by the Storage and Distribution Service.

Coal handling equipment was obtained in order that large quantities of coal might be efficiently handled with a minimum of labor. An effort was made to standardize this equipment as much as possible.



Motor Transport Service.—The Motor Transport Service of the Quartermaster Corps conducted for the Army the research, design, development, procurement, storage, distribution, and maintenance of motor vehicles and their accessories and equipment, and provided for the organization and training of motor transport units and personnel. Since July 1, 1940, the Motor Transport Service has purchased some 600,000 motor vehicles of all kinds for use by the Armies of the United States and the United Nations.

Increasing demands and changing requirements necessitated continual change in the organization of the service. A Personnel and Training Division to supervise the training responsibilities of the Motor Transport Service was established during the fiscal year. Although special and nonstandard items required by the United Nations have been supplied by the Motor Transport Service, plans were

made for the standardization of Allied and American motor supply.

Toward the close of the year a Director of Rubber Conservation was appointed in the office of the Director of Motor Transport and placed on a parity with the Deputy Directors. He was to prepare plans and establish policies governing the conservation and reclamation of rubber.

The Engineering Division of the Motor Transport Service developed new types of amphibian trucks, a new truck capable of carrying water under varying climatic conditions, new open cabs for trucks, the blackout driving light, radio suppression, and gasoline containers. A boxing and crating clinic was established to determine the optimum pack for each type of Army vehicle. The new packing methods developed resulted in savings of shipping space ranging from 40 to 70 percent, according to the vehicle. A wooden body for Army trucks was developed and production started.

An Expediting Section was created with the responsibility of overcoming difficulties created by priorities on materials, in the effort to keep the vehicle production schedule in line with requirements.

A Board of Contract Control was established in the latter half of the year to review contracts in excess of \$1,000,000. Principles laid down for contracts in excess of \$1,000,000 which came before the board were adopted likewise for smaller contracts. The Motor Transport Service also followed the policy of negotiating an adjusted price with subcontractors on substantial prime contracts in order to eliminate excessive profits through the sequence of supply.

At the close of the fiscal year the Motor Transport Service was entering negotiations for the direct supply of spare parts from original sources to avoid factors of time, cost, and supply which were involved in the purchase of parts through vehicle assembling companies rather than from the original manufacturer. Under existing statutes and procurement authority, it will be possible to save some millions of dollars through this method of direct supply, as well as to reduce the over-all requirement for spare parts by practical application of the interchangeability factor.

To facilitate distribution, the Motor Transport Service abandoned the long established system of control of distribution from Washington in favor of a more direct system of distribution through corps area motor pools. Upon receipt of instructions from Washington, vehicles were shipped by the manufacturer to corps area motor vehicle pools where they were issued to using organizations based on Tables of Allowances and Tables of Basic Allowances. The "automatic supply" system for overseas bases was inaugurated before June 30, 1942.

Approximately 50 motor transport districts were organized in the United States to help solve the maintenance problem. In each

district there was placed a district motor transport officer, with prime responsibility for maintaining motor vehicles within the district. A shop was established in each district to take care of heavy maintenance work.

During the year the motor repair shops at the Quartermaster Motor Base were assigned the responsibility of reconditioning engines, transmissions, and other heavy units on a production line basis.

Military Planning Service.—Current Quartermaster Corps Tables of Organization were revised and new Tables of Organization were developed during the past year. This revision necessitated the revision of tables giving troop movement data. There was developed during the year a system for the coordination of Quartermaster agencies in the supply of task forces. Upon receipt of a troop movement directive, the Requirements Division of the Production Service was given all information concerning the movement, and prepared supply requirement data broken down for each supply division and a consolidated list indicating weight and cubage of the items to be supplied. Each of the supply divisions was given supply requirements with a directive for shipment in accordance with the troop movement directive.

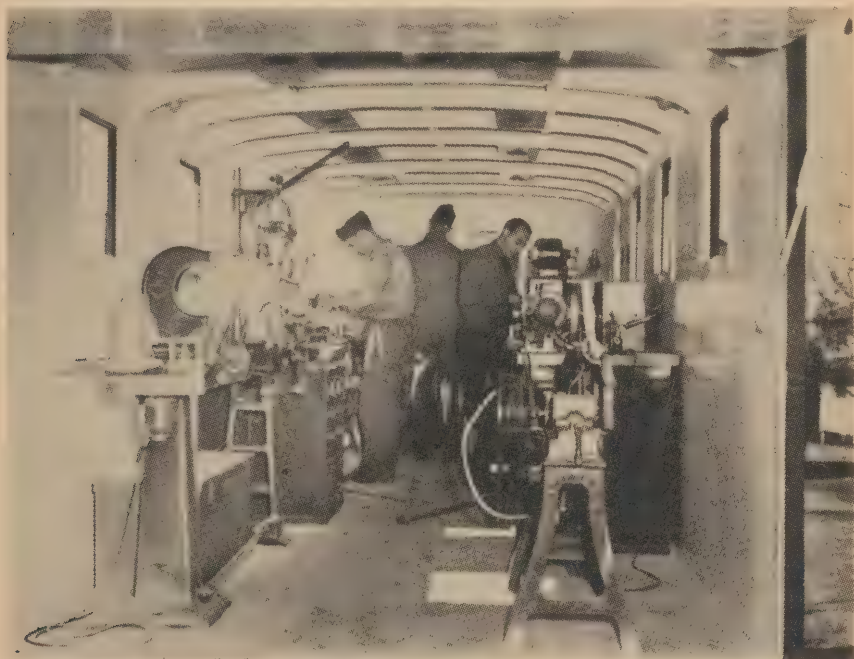
Service Installations.—The last of the operating services of the Office of the Quartermaster General was known as Service Installations. It combined under its supervision a number of miscellaneous responsibilities. A Memorial Division directed and supervised the care and maintenance of national and post cemeteries, the disposition of remains, and the supply of headstones. There were 79 national cemeteries, 1 of which was situated in Alaska and 1 in Mexico City.

In preparation for the ordered withdrawal of the War Department from C. C. C. activities at the close of the fiscal year 1942, the activities of the Office of The Quartermaster General pertaining to the C. C. C. were consolidated into a Civilian Conservation Corps Division. Plans were completed to transfer the organization and personnel to the Federal Security Administration. When Congress ordered the liquidation of the C. C. C., the Quartermaster General was directed to retain control of his C. C. C. activities for the period of liquidation.

A Salvage and Surplus Property Division supervised the maintenance and repair of clothing and equipage, and the disposal of surplus property and waste material. On July 1, 1941, there were 25 clothing and equipage repair shops in operation, and 75 shoe repair shops. By June 30, 1942, there were 171 clothing and equipage repair shops, and an additional 26 shoe repair shops were in operation or under construction. There were also 7 shoe repair shops and 14 equipage and repair shops at overseas bases.

Under the direction of the Laundry Division, 9 new camp laundries, each capable of serving from 5,000 to 20,000 men per 8-hour shift, were placed in operation during the year in the United States, and construction was nearing completion on 14 additional 20,000-man laundries.

The Printing Division directed the pronouncement, storage, and distribution of printing and binding requirements of the Quartermaster Corps and other Army organizations. It directed the administration, management, and operation of Army field printing plants



and administered the field contract printing requirements of the Army from commercial sources.

The Remount Division issued 6,537 animals to units during the year and 13,206 animals were returned to depots by deborsed units. At the close of the year, 21,360 issue animals were in depots and about 23,840 were in the hands of troops and at posts, camps, and stations.

The Quartermaster General.—The Quartermaster General on June 30, 1942, was Major General Edmund B. Gregory.

MEDICAL DEPARTMENT

The mission of the Medical Department has been the conservation of manpower—the preservation of the strength of the military forces.

Properly conducted physical examinations have guaranteed the selection and enrollment for military service of only those men physically fit for the performance of the duties to evolve upon them. The application of modern principles of preventive medicine has kept military personnel in good physical condition. Evacuation and hospitalization facilities have been provided to restore quickly to health and fighting efficiency those who become disabled.

During the fiscal year 1942, the activities of the Medical Department were greatly expanded to enable it to meet the requirements of the growing Army. Additional personnel was obtained; new hospitals were constructed and existing ones enlarged; medical supplies and equipment were procured and distributed; professional service and health measures were expanded; Tables of Organization were revised; medical sections of war plans were revised and rewritten; professional and tactical medical units were organized and trained for operation with task forces; and provisions were made for the tactical and professional training of new military medical personnel.

The Surgeon General early in the emergency requested the assistance and advice of the Medical Division of the National Research Council. That office immediately mobilized the leaders of the medical profession, making available the most advanced medical skill. At the annual meeting of the American Medical Association in June 1940, the Surgeon General requested the medical profession to assist in the procurement of the additional medical officers required by the Army. Committees were appointed and suitable plans developed insuring the equitable distribution of professional personnel to the Federal service and to the civilian communities.

In December 1939, the Secretary of War upon the recommendation of the Surgeon General requested the Administrator of the Federal Security Agency to authorize the U. S. Public Health Service to assist in the protection of the health of the Army by coordinating the activities of local and state health agencies in cantonment areas. This request was promptly approved.

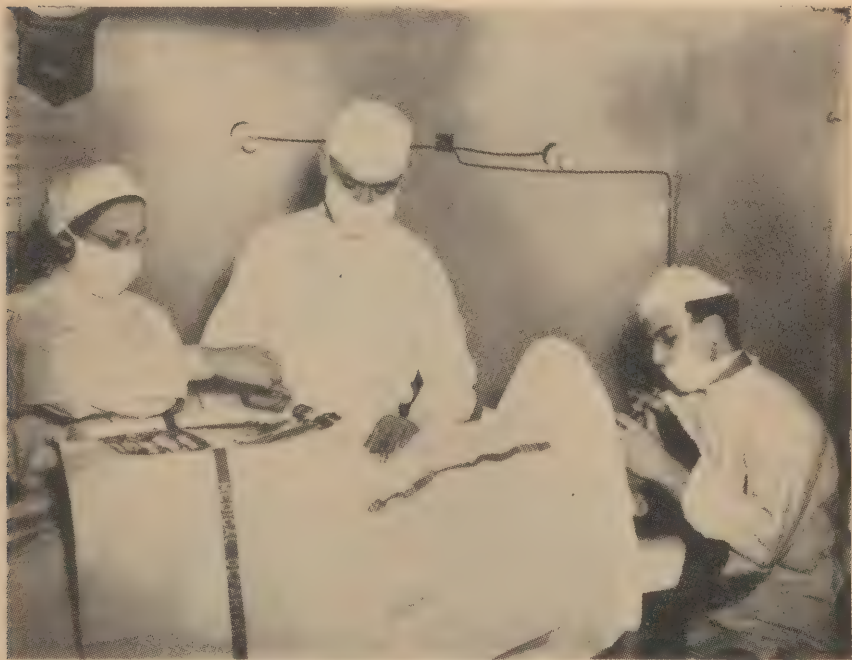
Health of the Army.—The health of the Army during the fiscal year 1942 was excellent. Admission rates generally were lower than those for the corresponding period of the last war even though the concentration of men tended to increase the incidence of communicable diseases.

The excellent health record has had a far-reaching effect upon morale, and the saving of lost time has added much to training programs.

Death rates from disease were less than 1 per 1,000, decidedly lower than that of civilian males in the same age group, and also lower than those for previous years in the Army. Accidents accounted

for more deaths than disease. In 1939 the ratio was 1 to 1, whereas in 1942 it was 2.3 to 1. The combined death rate, however, was the lowest in Army history, being well under 3 per 1,000.

Considering the highly mechanized status of the Army, the rapid increase in air activities, and the movement of large bodies of men by rail and truck, it was reasonable to expect an increase in admissions and deaths from accidents. The rates, however, were considerably lower for deaths. The Army has made special efforts to reduce accidents by education, training, and safeguards.



Preventive Medicine Service.—One of eight services in the Office of the Surgeon General, the Preventive Medicine Service, conserved the health of the Army through the prevention and control of infectious diseases and the elimination or diminution of occupational health hazards.

The Sanitation Division handled sanitary policies, training in sanitation, sanitary inspections, sanitary equipment, and sanitary reports. These activities increased after the War Department reorganization on March 9, 1942, when it became responsible for sanitation and mosquito control at air force stations and military industrial establishments.

The Surgeon General became increasingly concerned with the direction and coordination of sanitary engineering activities within the

Services of Supply. There was developed a dependable method for disinfecting small quantities of water required by the individual soldier.

The Medical Intelligence Division was engaged in the collection of data and information on health and sanitation conditions, facilities, public health organizations and their work in various countries, and other information which had a bearing upon the protection of the health of American troops in foreign areas.

The Occupational Hygiene Division through the corps areas directed the emergency medical service in Army-operated industrial plants and depots. It studied the hygiene of working conditions and occupational health hazards, and maintained an industrial hygiene laboratory at the Army Medical Center. By the end of the year, emergency medical service was being provided 400,000 civilian employees at more than 150 Army-operated plants.

In addition, the division was responsible for the supervision of the industrial health, hygiene, and environmental sanitation of War Department owned contractor-operated industrial plants.

The Venereal Disease Control Division formulated policies and plans for the prevention of venereal diseases. Its activities included the preparation of educational material, collaboration with civilian agencies engaged in venereal disease control activities, and continuous study of the problem of preventive measures. In February 1942, the War Department authorized the assignment of medical officers specially trained in venereal disease control to each large Army camp and to the headquarters of major elements of the field forces and supply services.

Professional Service.—The volume of professional work for the Medical Department increased greatly during the past year. It was necessary to review the reports of the large number of physical examinations of individuals being inducted into the military service, and to insure the satisfactory professional care of the sick.

The Professional Service of the Medical Department recommended to The Surgeon General policies on physical standards and physical examinations for military personnel. It also advised about the purchase and distribution of drugs, dressings, instruments, and medical equipment.

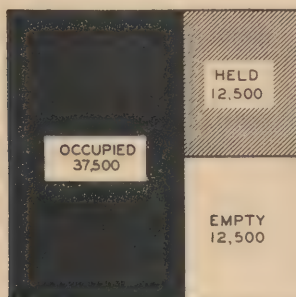
To provide for the proper supervision of the professional service at general and station hospitals, qualified civilian physicians were commissioned and assigned to duty in the office of the Surgeon General. One was in charge of surgical service, a second, of the practice of internal medicine, a third was an expert in neuro-psychiatry.

The Surgeon General early in the emergency obtained the services of an eminent nutritional expert to act in an advisory capacity in the selection and preparation of food.

Dental Service.—The Dental Service was concerned with the preservation of dento-oral health and the prevention of dento-oral diseases and deficiencies among military personnel. During the calendar years 1940, 1941, and 1942, dental attendance steadily increased. There was, moreover, relatively more need for dental service by the present Army than was needed by the peacetime Army, because of

CHART IX

BED STATUS, U. S. ARMY



JULY, 1941
TOTAL—62,500



JAN, 1942
TOTAL—80,500



JUNE, 1942
TOTAL—98,000

the constant flow of men from civil life, a large percentage of whom required immediate and extensive dental treatment.

Veterinary Service.—The Veterinary Service was charged with functions falling into two definite categories—those connected with Army animals, and those concerned with the inspection of meats, meat food, and dairy products. The animal service involved professional supervision over all matters pertaining to the health, efficiency, treat-

ment, and hospitalization of Army animals. The veterinary meat and dairy hygiene service protected the health of troops by determining that meats, meat food, and dairy products purchased and issued to troops were safe, wholesome, and suitable for food purposes.

During the calendar year 1941 the Veterinary Corps inspected 1,035,087,777 pounds of meats, meat food, and dairy products. Of this amount 51,720,441 pounds were rejected because of failure to meet contract provisions about type, class, or grade, and 6,324,892 pounds were rejected because of unsanitary or unsound condition.

With the institution of the new method of procurement of perishable subsistence supplies through Army Quartermaster market centers there has been a vast increase in the amount of Veterinary Corps inspection at points of origin of shipment of meats, meat food, and dairy products.

Personnel Service.—Personnel Service was charged with the procurement and classification of Medical Department personnel for the Medical Corps, Dental Corps, Medical Administrative Corps, Veterinary Corps, and Sanitary Corps. Properly qualified personnel were assigned and distributed. To provide information about proper assignment and reassignment it was necessary to maintain accurate records and cross-references on every individual officer, with information about his age, specialty, efficiency, and assignment.

In order to obtain a sufficient number of medical officers it was necessary to decentralize recruitment to the field. Teams consisting of a medical officer and a branch immaterial officer were organized and one team was assigned to each State. These teams were authorized to receive applications for appointment in the Medical Corps and to appoint each applicant a first lieutenant or captain according to age, if below the age of 45, and if certified as available by the Procurement and Assignment Committee. In addition, they were authorized to receive applications from physicians in the age group 45–54, which were forwarded to the Surgeon General.

Nursing Service.—The program for obtaining Reserve nurses through the corps areas was continued through the year. After the declaration of war, 5,866 nurses were inducted from January to June 30, 1942. Nurses were selected from the rolls of the American Red Cross. During the fiscal year 1942, 1,166 were appointed to the Regular corps and 8,406 were assigned as Reserves. The authorized strength of the Army Nurse Corps for the fiscal year 1942 was 18,114. The number on duty on June 30, 1942, was 12,475.

In order to increase the eligibility of nurses for appointment, the age requirements were raised to include those up to 45 years of age.

Operation Service.—The Operation Service as organized in March 1942 comprised Plans, Training, Hospital, Administration, Hospital Construction, and Sanitary Inspection Divisions.

The Plans Division of the Operation Service was concerned with war plans, Tables of Organization, Tables of Basic Allowances, and development of new field equipment. The Division submitted recommendations about medical units to be included in War Department troop basis and about the time of activation to permit adequate training prior to transfer overseas. It also furnished advice to the Services of Supply on hospitalization and medical service in existing and proposed bases and theaters.

In June 1940, the training of Medical Department officers was confined to that received at the Army Medical School, Washington, D. C., and the Medical Field Service School, Carlisle, Pa. In the fiscal year 1941, 183 officers graduated from those 2 schools.

By June 30, 1941, facilities had been provided for the training of 500 officers every 2 months and for 100 officer candidates every 3 months. These facilities were expanded further so that by June 30, 1942 there were provisions for training 800 officers and 750 officer candidates every month, and 1,500 replacement officers every 2 or 3 months. In addition, arrangements were completed for the training of 600 to 700 officers each month in civilian schools or hospitals.

During the fiscal year 1941, 165 enlisted technicians were trained at the Army Medical Center. Training facilities by June 30, 1942 were being enlarged so that Medical replacement training centers might provide basic training to 53,000 persons every 8 weeks; Medical Department enlisted technicians were being trained at the rate of 3,000 every month; administrative or common specialists at the rate of 6,000 every 2 months. In addition, 300 advanced specialists were to be trained each year in civilian educational institutions, and 45 every 3 months in general hospitals.

The Hospital Division developed and issued policies about hospitalization and the treatment of the military sick. It operated the general hospitals and supervised station hospitals. The allotment of bed credits in the general hospitals and the assignment to them of patients transferred from overseas bases was an important function of the division.

Arrangements were made with the Veterans' Administration to transfer promptly to their facilities soldiers who became physically unfit for further military service and whose incapacity was incurred in line of duty. Hospital facilities were constructed by the Engineer Department for the Medical Department.

The Organization Division revised Medical Department Tables of Organization to provide proper support for new types of combat units. In order to economize on medical personnel, the number of medical officers required by the Tables of Organization was reduced to the absolute minimum.

Finance and Supply Service.—The Finance and Supply Service was responsible for the preparation and justification of budgetary estimates for the Medical Department and for the procurement and distribution of all medical supplies and equipment, both within and without the continental United States.

In conformance with the organization of Headquarters, Services of Supply, the Finance and Supply Service was reorganized in March 1942, to provide the following divisions: Finance, Procurement, Storage and Issue, Production Control, and Miscellaneous.



As funds were appropriated and made available to the Medical Department they were allotted to depots, hospitals, stations, and other field installations, as well as to departmental and other purposes.

The actual purchase of medical supplies and equipment was performed mainly by purchasing and contracting officers in field depots operating under the technical supervision of the Chief of the Finance and Supply Service in Washington. There were some 6,000 separate and distinct articles, which were procured from about 700 manufacturing concerns in the United States.

The Finance and Supply Service conducted industrial surveys to determine the productive capacity of American industry to meet the requirements of the Medical Department. Delinquencies in deliv-

eries to depots were the subject of investigation, and recommendations for corrective action were promptly made.

The original and supplemental appropriations made available during 1942 to the Medical Department provided over \$300,000,000 for supplies and equipment. In 1940, total appropriations were \$4,300,000.

Through the cooperation of the Army, Navy, National Research Council, American Red Cross, and commercial biological manufacturers, a blood plasma procurement program calling for the production of a minimum of 700,000 units of dried plasma for the Army was instituted. Donations of raw blood were made to the American Red Cross and then shipped to some 8 laboratories holding contracts with the Army for the processing of the blood into dried plasma.

The Surgeon General.—The Surgeon General of the Army on June 30, 1942, was Maj. Gen. James C. Magee.

CORPS OF ENGINEERS

In its military activities the Corps of Engineers was responsible for all construction for the Army—from such permanent installations as camps, depots, industrial plants, and seacoast defenses to temporary installations in a theater of operations such as fortified positions and ponton bridges. To perform this work the Corps of Engineers obtained the necessary men, supplies, and equipment.

Many projects vital to the successful prosecution of the war were undertaken by the Corps of Engineers during the fiscal year 1942. Construction of the Alaska-Canadian highway was begun. Special units were constituted for the rehabilitation of oil wells. Amphibian brigades, airborne battalions, and air force engineers were created. Plans were developed for railway troops and equipment in theaters of operations. Continuous progress was made in providing new major caliber seacoast batteries and in modernizing existing facilities. Improved methods for the protection of important installations against aerial attack were studied and developed. Tests were made to determine the resistance of structures to the effects of bombs. Blackout, tone down, and camouflage work was done.

Construction.—The Army's housing and plant construction program was transferred to the Office of the Chief of Engineers from the Office of The Quartermaster General by Act of Congress approved December 1, 1941. The war construction program at the end of the fiscal year included nearly 1,700 construction jobs of all types. The total estimated cost was around 7.5 billion dollars.

The construction program progressed satisfactorily in spite of certain acute shortages in numerous construction materials, in equipment, and in construction labor of all types.

Toward the end of the fiscal year the Chief of Engineers was authorized on behalf of the Commanding General, Services of Supply, to examine carefully the construction requirements of various services and to make all possible reductions.

Housing facilities for nearly 2,500,000 men had been completed by the end of the fiscal year. The construction program for the Army Air Forces was doubled during the year, that for ordnance plants was increased 50 percent. By June 30, 1942, the completed construction for Army installations since 1940 amounted to 4.3 billion dollars.

Maintenance and repair.—The completion of a large portion of the military construction program during the fiscal year 1942 greatly increased the problem of maintenance of facilities. Appropriation needs for maintenance and repair rose from \$85,646,596 in 1941 to \$237,623,724 in the fiscal year 1942. Some idea of the size of the maintenance job can be gained from realizing that the roads in Military Establishments would more than provide three 20-foot highways from New York City to San Francisco. The Army's railroad trackage was equivalent to the railroad mileage between New York City and St. Louis, Mo. A total of 468,000 acres was maintained for parade and recreational purposes. The entire population of Kansas City, Kans., could be taken care of in hospitals provided for troops. The 239,553,000 square feet of barracks floor space, if constructed end to end in a strip 30 feet wide, would reach approximately from Chicago, Ill., to Philadelphia, Pa. Pumping capacity of the Army's water supply system was sufficient to supply the combined populations of Iowa and Kansas.

The standards realized in maintenance operation of sewage treatment and water supply systems exceeded the minimum requirements of the Medical Department.

During the fiscal year 1942 all repairs and utilities activities were placed in the hands of the Chief of Engineers. Provision was made, however, that whenever the best interests of the Army so required, the Commanding General, Services of Supply, might assign repair and utilities functions at certain Army posts to the chief of another Supply Service.

Supervision of the field activities of the Repairs and Utilities Branch was transferred from the nine district engineers having offices in the same city as corps area headquarters to the division engineers responsible for those districts. The "Post Utilities Officer" was redesignated the "Post Engineer."

The Services of Supply established new classifications for accounting and control of maintenance funds, necessitating extensive changes in budgeting and distribution procedures. The changes in the fiscal system reduced the number of procurement authorities outstanding

CHART X

VALUE OF THE WAR CONSTRUCTION PROGRAM AS OF JUNE 30, 1942



ORDNANCE PLANTS
AND DEPOTS



AIR FORCE TACTICAL SCHOOLS,
DEPOTS, ETC.



CAMPS AND CANTONMENTS



STAGING AREAS, OVERSEAS DISCHARGE
AND REPLACEMENT DEPOTS,
PORT FACILITIES, GENERAL HOSPITALS,
AND MISCELLANEOUS



OTHER TROOP FACILITIES



STORAGE
(OTHER THAN AMMUNITION)



CHEMICAL WARFARE PLANTS



TOTAL VALUE

in field from approximately 11,000 to 100. The new cost accounting system provided data for use in the preparation of budget estimates.

Passive protection.—Extensive studies were carried out on the development of improved methods for the protection of vital installations against aerial attack. Facilities were provided for the blackout, camouflage, or concealment of existing military installations and of specified privately owned plants.

Civilian war housing.—With the reorganization of the War Department, the Chief of Engineers assumed the responsibilities formerly vested in the Office of the Under Secretary of War for housing workers in Government-financed war production plants. This was in addition to the responsibility for civilian housing on or adjacent to military reservations.

The Chief of Engineers was responsible for the supervision and management through the Repairs and Utilities Branch of more than 5,000 family dwelling units located within the boundaries of military reservations, which were transferred to the jurisdiction of the War Department by Executive order on February 24, 1942. With funds made available to the Chief of Engineers by the National Housing Agency, both family type dwellings and dormitory units were begun during the year. Construction of dormitories with War Department funds to meet the most urgent civilian housing needs was authorized.

Real estate.—During the fiscal year 1942 the War Department, through the Real Estate Branch of the Office of the Chief of Engineers, acquired a total of 5,312,702 acres of land, or an area only slightly less than three-quarters the size of Belgium. In addition, 1,683,021 acres were leased for camps, cantonments, and airports; 54,000,000 square feet of storage space were obtained; and 10,789,486 square feet were used for various purposes such as offices, barracks, and quarters. The total amount paid for this land was \$133,908,988, or more than three times the cost of Alaska and the Louisiana Purchase combined.

The largest amount of land, 2,660,920 acres, was required for camps and cantonments, with Air Corps projects occupying 1,435,906 acres, and manufacturing plants 547,128 acres.

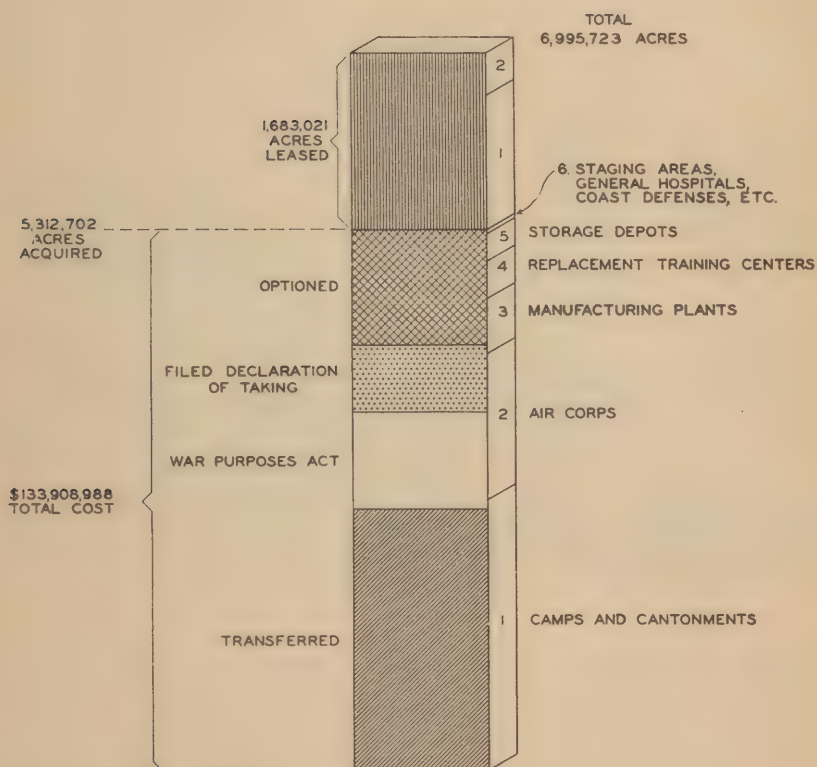
One serious problem which confronted the War Department in its real estate program was the development of a procedure whereby landowners might receive compensation at the earliest moment compatible with full protection of the Government's interests. On virtually every military project, speed was the paramount consideration and possession of the land had to be obtained immediately. Since possession was ordinarily obtained at once, it was impossible to appraise the property, negotiate with the owner, obtain title evidence on the individual tracts, examine the title for the Attorney General's approval, and at the same time pay for the premises at the time of

taking possession. Every effort was made by both the War Department and the Department of Justice to expedite the various steps before compensation could be paid.

The real estate work of the Chief of Engineers was greatly increased by the transfer of the Construction Division, Office of The Quartermaster General. The nine quartermaster zones of the Con-

CHART **XI**

LAND ACQUIRED DURING 1942 BY THE OFFICE OF THE CHIEF OF ENGINEERS



struction Division were shifted to the 13 engineer divisions. Prior to December 1941 responsibility for the War Department's civil land acquisition, including river and harbor works and flood control projects, was vested in a separate unit attached to the Chief of Engineers. With the transfer of the Real Estate Branch of the Quartermaster Construction Division, the groups were consolidated.

Every reasonable effort consistent with military needs was made

to acquire inexpensive lands, and wherever possible, to utilize property already owned by the Federal Government. Exchanges or transfers were effected with other governmental departments and agencies such as the Navy, Treasury, and Commerce Departments; the Veterans' Administration; and the Federal Security Agency. Wherever possible, attempts have been made to effect exchanges of federally owned land for land owned by States, municipalities, railroads, or private individuals.

Supply.—The procurement, storage, issue, and maintenance of engineer equipment and supplies for troops and for seacoast fortifica-



tion, with the exception of the local procurement of certain office and miscellaneous operating supplies, were centralized in the Supply Division.

Among the major items purchased by the Corps of Engineers were antiaircraft searchlights, ponton bridges, railway equipment, power shovels and heavy construction equipment, map reproduction equipment, camouflage materials, compasses, surveying and drafting equipment, oil refineries and pipe lines, gasoline canning plants, fixed and portable bridges, assault boats, and lumber and building materials. Appropriations for Engineers military supply in 1942 were more than 1.5 billion dollars. Another \$100,000,000 was allocated from lend-lease funds.

Research and development.—During the fiscal year 1942 research and development of engineer equipment was actively pursued.

In the field of stream-crossing equipment, many results were obtained. A steel treadway bridge for use by the Armored Force was designed and adopted. An infantry support raft and infantry support bridge were likewise designed and adopted. Improvements were made in light ponton bridging equipment and in the erection technique. Pontons were redesigned to permit the use of steel and plywood for more critical material. Extensive research was undertaken to provide substitutes for crude rubber in pneumatic floats with



successful results. Improvements in the transportation of bridging equipment were effected.

Development of all types of blackout equipment and blackout techniques were accelerated. War Department specifications "Street Lighting During Blackouts," "Blackouts of Buildings," and "Blackout Requirements for Highway Movement" were prepared and transmitted to the Office of Civilian Defense. In cooperation with the Navy Department, preliminary studies were conducted of the coastal dimout problem.

Other interesting developments included the techniques of wide angle mapping, in which many improvements were made. A search-light suitable for beach defense illumination was developed. A search-

light trailer was developed and adopted as standard equipment. Several types of amphibian boats were tested. Motorized shops for use in connection with the maintenance of mechanical equipment were developed and adopted. Extensive studies and tests were made on various types of portable landing mats for airfields.

As a result of observations made during 1941 maneuvers, many new items of equipment for use in traffic control were investigated and developed. Traffic control technique was studied and tested.

Much work was accomplished in the field of camouflage. Many items of camouflage equipment were developed and tested. Camouflage plans were prepared by the Engineer Board for many vital War Department installations including overseas bases and airfields.

Operations and training.—Construction needs in overseas theaters of operations under their respective commanding generals made it necessary to activate regular and special engineer units, prepare supply directives, and organize task forces. Examples of special units constituted were those for the rehabilitation of oil wells, aviation units, air force engineers, amphibian brigades, and airborne battalions.

It was necessary also to study engineering problems that might be encountered in any part of the world—water supply problems, oil lines, port facilities, highways and roads, and air ferrying routes.

The Operations and Training Branch of the Office of the Chief of Engineers prepared and revised Mobilization Training Programs for engineer replacement training centers and for engineer units of all types.

Tables of Organization for the following new type units were approved before June 30, 1942: Engineer Motorized Battalion, Engineer Mountain Battalion, Engineer Special Service Regiment, Engineer Camouflage Company (Separate), Engineer Railway Diesel Shop Battalion, Engineer Heavy Shop Company, Engineer Equipment Company, and Engineer Forestry Company.

Seacoast batteries.—Continuous progress was made in providing new major caliber seacoast batteries and in the modernization of existing facilities. The incorporation of the Coast Artillery Advisory Committee in the Office of the Chief of Engineers greatly accelerated the handling of seacoast fortification projects.

Railway Branch.—The development of plans for railway troops and equipment in theaters of action and the preparation of estimates for proposed strategic railways were performed by the Railway Branch. Contracts to use railway facilities and personnel for training a battalion of railway troops were made with five major railroad companies.

Lend-lease operations led to a varied demand for railway equipment. Efforts have been made to standardize all railroad equipment wherever it might be used.

Intelligence Branch.—Mapping and the collection and analysis of physical data about theaters of operations were undertaken by the Intelligence Branch. The mapping activities of other Government agencies were coordinated in accordance with interdepartmental agreements of October 1941, approved by the President December 16, 1941.

Military personnel.—With the increased number of commissioned and enlisted personnel of the Corps of Engineers, the work of the Military Personnel Branch was correspondingly enlarged. The branch handled the procurement, classification, and appointment of officers from civil life in numbers to meet requirements; it made allotments of personnel to agencies operating directly under the Chief of Engineers; it handled awards and citations for gallantry or meritorious service; and made arrangements for decentralization of personnel activities.

From July 1, 1941, to June 30, 1942, the number of separate engineer troop units, companies to regiments, inclusive, increased from 110 to 322. The number of officers assigned to construction work increased from 324 to 2,070 from June 30, 1941, to June 30, 1942.

Civilian personnel.—On November 30, 1941, there were 76,533 civilian employees in the Corps of Engineers; on June 30, 1942, this number had increased to 221,290. This large expansion resulted in great part from the transfer of construction activities of the Quartermaster Corps to the Corps of Engineers, and from the authorization of many new projects.

Fiscal.—Methods for allotting funds for the various military activities under the Corps of Engineers were revised, resulting in very substantial reductions in the number of finance accounts to be maintained. The steps taken brought about greater flexibility in the use of funds, and resulted in a decrease in the number of employees required both in the field and in Washington. A system of finance accounting for military work was developed to provide uniformity in the classification of accounts in the field offices and to facilitate reporting on the status of funds.

Cost accounting and reporting were reduced to the minimum required for control purposes in the field during the course of construction.

With the approval of the Fiscal Division, Services of Supply, auditing procedure on cost-plus-a-fixed-fee contracts was simplified by adopting the principle of selective audit followed by private accounting firms.

Claims and appeals arising out of contracts for Army construction, including contracts for the large cantonments and Ordnance works originally negotiated by the Office of the Quartermaster General, were considered by the Contracts and Claims Branch. By the end of the fiscal year, final settlements had been made for most of the 1940 contracts, thus avoiding expensive and long-drawn-out litigation.

The Chief of Engineers.—On June 30, 1942, Maj. Gen. Eugene Reybold was the Chief of Engineers.

SIGNAL CORPS

The Signal Corps was responsible for providing the Army with dependable communications to and from all points at all times without delay. As in so many other phases, the reliance placed upon communication instruments of many kinds indicated how truly this war has become a "war of science."

Some measure of the expansion required of the Signal Corps can be had from the growth in personnel from 2,064 officers, 36,762



enlisted men, and 6,902 civilian employees at the beginning of the fiscal year 1942 to 9,572 officers, 120,000 enlisted men, and 54,000 civilians on June 30, 1942. Signal Corps appropriations multiplied from under \$300,000,000 in 1941 to over \$3,000,000,000 in the fiscal year 1942.

At the beginning of the fiscal year 1942, the Office of the Chief Signal Officer consisted of an Executive Officer and 12 divisions. This arrangement of responsibilities was subsequently changed to 3 main functional branches—a Matériel Branch, an Operations Branch, and an Administrative Branch. The Matériel Branch consisted of a Research and Development Division, Scheduling Division, Procurement Division, Storage and Issue Division, Maintenance Division, Legal Division, and Plant Division. The Operations Branch consisted of

a War Plans and Training Division, Coordination and Equipment Division, Photographic Division, Traffic Division, and the Signal Intelligence Service. The Administrative Branch consisted of a Fiscal Division, a Service Division, a Military Personnel Division, a Civilian Personnel Division, and an Intelligence Division. The executive staff of the Chief Signal Officer consisted of a Directorate of Planning, a Directorate of Administration, and a Communication Coordination Division.

The Communication Coordination Division undertook to reduce, simplify, and standardize various types of Signal Corps instruments. In this work it had the cooperation of an Advisory Board made up of civilians prominent in the field of communications. An Advisory Council was also established.

Research and Development.—During the fiscal year 1942, numerous scientific appliances were developed by the Signal Corps, involving a rapid expansion of both personnel and facilities. Development work was divided into two separate agencies, one on general development and the other on specialized equipment.

Procurement.—The Signal Corps had to procure and supply to the various arms 40,000 items of equipment. Approximately 50 percent of the essential items were difficult to procure and were classified as critical.

By December 1941, the Signal Corps had placed with the radio industry alone orders amounting to over \$600,000,000; by May 1942, the figure had reached the total of about 2 billion dollars.

Working closely with the War Production Board, the Office of the Chief Signal Officer was able to assist in the complete conversion of the radio manufacturing industry to war production.

Since speed and large scale production were of primary importance during the defense period, the making of Signal Corps equipment was concentrated in the hands of the five principal manufacturers of communication equipment. As the war needs expanded, however, new facilities were created, domestic radio production was terminated, and the conversion of other industries to radio manufacturing was accomplished. The production load was carefully distributed over a greater number of manufacturers, until more than 10,000 firms in the United States were engaged in the production of Signal Corps equipment.

An important result of lend-lease activities was the development and standardization of equipment to operate satisfactorily under the widely varying conditions found in different countries. Opportunity for the actual test operation of American equipment in battle, made possible by the lend-lease program, contributed directly to the refinement and improvement of equipment for American troops.

An important phase of the procurement problem toward the end of the year was that of meeting shortages of critical materials. The Signal Corps sought, wherever possible, to employ substitutes for critical metals.

Decentralization and the delegation of authority to local offices speeded the production and delivery of Signal Corps items.

The Army communication network.—The Signal Corps provided the War Department and other Government agencies with a special communication service by wire and radio to and from all vital points in the United States and overseas. Messages were sent either through commercial channels leased from private firms or through Government-owned facilities maintained and operated by the Signal Corps. For wire communication the Army's needs were met principally by using existing commercial circuits, either leased or on a message basis. For radio communication, the Army relied for the most part on the independent War Department Radio Net established in 1923.

Traffic handled by the War Department Signal Center grew during the fiscal year, particularly after the declaration of war. For the fiscal year 1941 the gross traffic was 72,978,316 words. For the fiscal year 1942 the total was 130,773,400 words, or 79 percent larger than in the preceding year.

The past year witnessed the first use of radiotype, which transmitted radio signals from a perforated tape to automatic printers at the receiving end, the transmission being carried on at a steady rate of 105 words per minute.

A thorough study was made of available commercial telephone, telegraph, and radio facilities, with the result that arrangements were made to distribute traffic loads over a 24-hour day.

A system of microfilm records was installed during the year in the War Department Signal Center. This was done in order that permanent records might be made of important wire and cable correspondence.

At the request of the Army Air Forces, the Signal Corps made arrangements establishing a bookkeeping-by-wire system using IBM machines to link the Army Air Forces Matériel Section at Wright Field with aircraft factories and Government-furnished equipment warehouses throughout the country.

To accelerate the placing of orders for aircraft radio equipment, the Wright Field Signal Corps Procurement District was activated in October 1941, and given a much broader field of activity than other procurement districts. It procured airborne equipment almost exclusively.

Photography.—The growth of the photographic work of the Sig-

nal Corps was acknowledged by the expansion of the pictorial division into the Army Pictorial Service. The Training Film Production Laboratory at Fort Monmouth became the Signal Corps Photographic Center, with extensive facilities and manifold activities in Long Island City, N. Y.

Training films were produced by the Signal Corps for all arms of the service with the guidance and advice of officers highly trained and expert in their respective specialties. Training Films on 78 subjects, totaling 164 reels, were approved for release during the year.

With the cooperation of the Coordinator of Inter-American Affairs, the State Department, and G-2, a program was undertaken for the translation and rescoring of approximately 175 War Department Training Films for release throughout Central and South America. Training films were exchanged with the U. S. S. R., and were provided to China.

Another achievement of the Army Pictorial Service was the V-mail service, which utilized microfilm to reduce letters to and from soldiers overseas to minute dimensions and bulk.

Military personnel and training.—Obtaining and training the necessary personnel for the efficient operation and maintenance of communication equipment and for the procurement of Signal Corps supplies constituted one of the most important activities of the Chief Signal Officer. A Military Personnel Division was set up for this work. Later a separate Military Training Division was established.

The constantly changing conditions and needs of a modern mobile army necessitated the formation of new Signal Corps units, including signal companies for motorized and armored divisions.

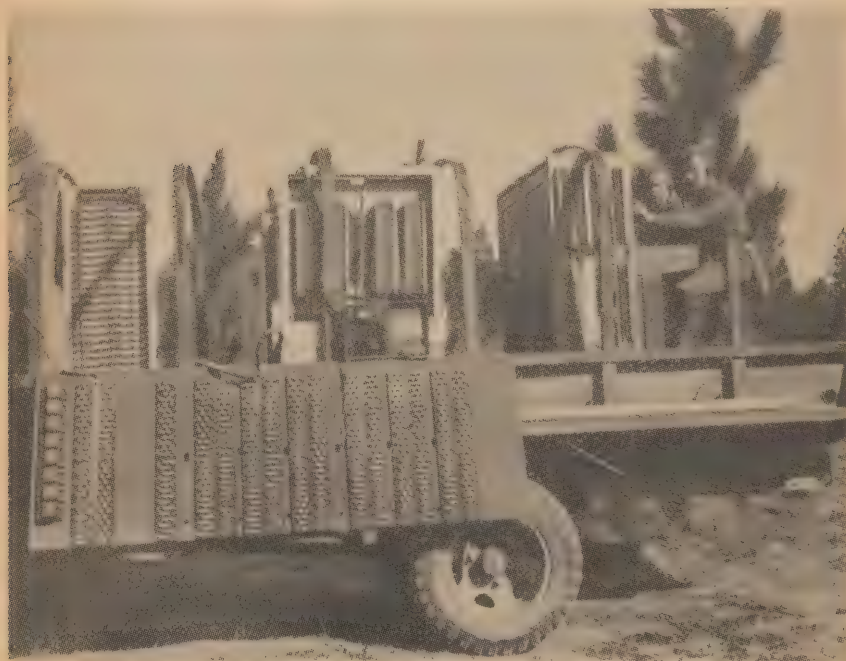
By the middle of March 1942, the need for experienced Signal Corps personnel, both officers and enlisted men, became alarmingly acute. Resort was had to the affiliated unit plan under which private communication corporations selected men from their organizations to make up small cadres, each of which became a nucleus for one of the Signal Corps units organized for active service. This plan, first worked out in 1938, assured the proper allocation of qualified men to positions where their special skills would be of the greatest use. Each corporation cooperated. It recommended the officers as well as the enlisted technicians for appointment.

Men for the new units were enlisted in the Enlisted Reserve Corps and remained in their civilian duties until the unit was activated.

Circularizing the Radio Manufacturers' service members throughout the Nation brought many radio specialists into the Signal Corps. The American Telephone and Telegraph Company in May inaugurated a plan of reporting to the Signal Corps men inducted from its organization into the Service.

The rapid expansion of training facilities led to a reexamination of courses and careful control of curriculum so that teaching might be uniform in scope. A special branch was established in the Military Training Division to handle this important work.

Original plans for the establishment of the Midwestern Signal Corps School at Camp Crowder were made in December 1941, when it was contemplated that 1,800 students would be provided for in the replacement training center and 700 in Signal Corps specialists' schools. In May 1942, the authorized capacity of the replacement



training center was increased to 13,435, and the school was increased to 6,000.

The Replacement Training Center authorized for establishment near Sacramento, Calif., used facilities originally provided for the Walerga Japanese Collection Camp. This Signal Corps center with an initial capacity of 2,000 trainees, was scheduled to open on September 15, 1942.

In August 1941, 5 civilian schools were used for training Signal Corps specialists with a total enrollment of 210 students.

Civilian personnel and training.—The hiring of thousands of civilians followed the increased demands for Signal Corps equipment. Finding competent civilian personnel presented many difficulties. Since the functions of the Signal Corps were many and scientific in

nature, the greater part of its personnel had to be men of high caliber and intelligence. Hundreds of communication experts were obtained from commercial communication companies.

Efforts were made to recruit 1,000 college seniors at the beginning of the second semester of their senior year.

With the cooperation of the War Department Bureau of Public Relations, newspaper and radio publicity was used over a period of months in appeals for civilian help in all fields of communication and photography.

A letter was addressed to the chief engineer of practically every broadcasting station in the United States asking for the release of any available employees and for information about former employees. A recruiting mission was instituted in April 1942, to visit the principal cities of the Nation. In about 2 months its endeavors brought in over 1,200 needed employees.

To expedite and coordinate training work, a Civilian Training Section was established in the Civilian Personnel Division on November 19, 1941.

At the close of the fiscal year on June 30, 1942, a total of approximately 250 vocational schools and colleges were conducting Signal Corps courses for about 20,000 trainees. Official estimates called for a total of 76,000 trainees in vocational schools by the close of the fiscal year 1942.

General.—The Signal Corps maintained some 70 repair shops throughout the United States and overseas for the swift repair of signal equipment. At the end of the fiscal year 1942 there were also some 30 Signal Corps depots.

The Chief Signal Officer.—Major General Dawson Olmstead was Chief Signal Officer on June 30, 1942.

CHEMICAL WARFARE SERVICE

Born of the first World War, the Chemical Warfare Service was given even greater responsibilities in the present war. As before, Chemical Warfare Service had to provide troops and equipment for offensive chemical warfare in case such measures were used against the United Nations; and also, had to provide defensive protection against gas for all military personnel. This time, however, there was the task of taking steps to provide similar protection to the civilian population. The growth of air power provided yet a third task—the development of incendiary bombs.

Like other arms and services of the Army, Chemical Warfare Service experienced great expansion after December 7, 1941. Before the outbreak of general war in Europe in 1939, expenditures for the Chemical Warfare Service were less than \$2,000,000 a year. In the

fiscal year 1941, before the United States was attacked, these were increased to more than \$60,000,000 a year. For the fiscal year 1942, total appropriations were more than 1 billion dollars. The result has been not only expansion of Government arsenals, but also procurement of supplies from a great number of private manufacturing plants. Facilities have been used wherever they could be found. It was estimated that no less than 5,000 firms of one type or another were engaged in filling chemical warfare orders.

Chemical Warfare Service had three principal operating divisions: the Industrial Division, the Technical Division, and the Field Division. The Industrial Division had charge of procurement activities, the Technical Division developed and designed offensive and defensive equipment, and the Field Division trained troop units in chemical warfare operations.

Perhaps the most important accomplishment of the Chemical Warfare Service in the past year was the manufacture of incendiary bombs. Shortages of magnesium supply led to the development of a new type of bomb made from less scarce metal. The success of the whole effort was demonstrated in General Doolittle's attack upon Tokyo.

Long before the outbreak of war, Chemical Warfare Service took steps to provide our fighting forces with gas masks. By June 30, 1942, Chemical Warfare Service had equipped all men in active service with the most modern type of gas mask and had provided technical instruction in the defensive phases of chemical warfare.

A vital accomplishment of the Chemical Warfare Service was the development and utilization of satisfactory substitutes for materials made scarce by the war. One important discovery was that activated charcoal was just as good, if not better, than imported coconut shells as filler in gas mask canisters. Equally serviceable plastics have been used for certain gas mask parts. The Chemical Warfare Service studied the possibility of making facepieces of other materials in order to conserve rubber. The new dust respirator was made largely of filtering felt.

Procurement.—The procurement operations of the Chemical Warfare Service were performed by district procurement offices. Prior to December 7, 1941, there were five such procurement offices throughout the United States. By the end of the fiscal year there were seven.

The ability of industries to convert plants to war purposes was illustrated by several companies supplying needed chemical warfare materials. A manufacturer of ladies' compacts was producing mortar shells; a linoleum firm was fashioning bomb clusters; a stove company and a wallpaper manufacturer were making the filler for incendiary bombs; a lumber company was furnishing activated charcoal; and a novelty firm was turning out outlet valves.

Research and development.—While most of the research and development work for Chemical Warfare Service was done at Edgewood Arsenal, in the past fiscal year two supplemental laboratories were established at Columbia University and at the Massachusetts Institute of Technology. Also important development and testing work was done at the Dugway Proving Ground, which was set up early in 1942.

Other important research results were the development and standardization of flame throwers, standardization of gas masks, and improved designs for productive plants. In the summer of 1941 the development and procurement of all incendiary bombs were transferred from the Ordnance Department to the Chemical Warfare Service.

Field Division.—A Field Division to handle expanded field activities of the Chemical Warfare Service was created on July 15, 1941. It was organized from certain operations, training, and supply units in the Office of the Chief of Chemical Warfare Service. A troops section was established as part of the division on August 24, 1941. In March 1942, the chief of the division became chairman of the Chemical Warfare Equipment Board.

The Field Division stored, issued, and shipped chemical warfare materials and equipment. It prepared Tables of Organization and Tables of Basic Allowances of chemical warfare supplies for all troops. It maintained chemical troops. It compiled and issued training material. The division supervised both military and civilian personnel activities at field stations and at depots. All dispatch of chemical warfare troops abroad were arranged by the Field Division.

By the end of 1942 the Chemical Warfare Service had four arsenals instead of the one it operated before the emergency. Instead of one depot and one section of a general depot, Chemical Warfare Service had four depots, six sections of general depots, six depots at ports of embarkation, and a number of overseas depots.

The Chemical Warfare Service trained all arms and services of the Army in phases of chemical warfare. Similar instruction was given selected officers and men of the Navy, Coast Guard, Marine Corps, and the United Nations.

Special units were trained by the Chemical Warfare Service for attachment to the Army Ground Forces, the Army Air Forces, and Combat Commands. These units were of various types and differently organized between ground and air service. Included were Chemical Depot Companies, Chemical Impregnation Companies, Chemical Maintenance Companies, Chemical Decontamination Companies, Chemical Laboratory Companies (Aviation), Chemical Companies (Air Operation), and Chemical Companies Depot (Aviation). Separate Chemical Warfare Battalions and Companies were organized.

At Edgewood Arsenal the Chemical Warfare Service maintained a number of schools. Troop training was carried on at the Replacement Training Center, which on June 1, 1942, was transferred to Gadsden, Ala. The Officer Candidate School was a part of the War Department's training system to qualify selectees and enlisted men for commissions as second lieutenants. The Chemical Warfare School provided advanced instruction in chemical warfare to selected officers from the Army and from other services.



Also at Edgewood Arsenal was a Chemical Warfare Officers' Replacement Pool where officers continued to take special work until assigned to troop units.

Civilian protection.—The Office of Civilian Defense was set up as an independent agency under the President for handling matters of civilian protection against air raids. The Chemical Warfare Service, together with other parts of the War Department, lent technical assistance to the Office of Civilian Defense. The procurement of civilian gas masks for distribution by the Office of Civilian Defense was handled by Chemical Warfare Service. The Chemical Warfare Service provided officers to conduct civilian protection schools jointly sponsored by O. C. D. and the War Department. Men and women graduating from these schools were expected to return to their

homes qualified to instruct local groups in civilian protective measures.

Chief of Chemical Warfare Service.—The Chief of Chemical Warfare Service on June 30, 1942, was Maj. Gen. William N. Porter.

TRANSPORTATION SERVICE

The Transportation Service was created on March 9, 1942, as a single agency bringing together the Transportation Branch of G-4 Division of the General Staff, the Transportation Division of the Office of The Quartermaster General, and ports of embarkation, staging areas, and regulating and reconsignment stations for overseas shipment. The Transportation Service directed all transportation movements of 50 men or more, except movements by air.

At the close of the fiscal year 1942, the Transportation Service had 5 major operating divisions: Water, Rail, Highway Transportation, Transit Storage, and Traffic Control. An Air Division was organized on June 4, 1942, and transferred to the Army Air Forces on July 1, 1942. In addition to the operating divisions there were 8 staff divisions for personnel, legal and fiscal work, planning, requirements and procurement, training and intelligence, operations, administration, and control and inspections. The Transportation Service numbered 4,049 officers, 23,174 enlisted men, and 40,516 civilians. Total Transportation funds for the year were more than 1 billion dollars.

Water Division.—The Water Division operated the largest single shipping business in the history of the United States. It prepared general plans for the use of Army owned and chartered vessels to meet military passenger and cargo requirements. It supervised the manning, fitting, and operation of vessels and directed terminal and stevedoring operations. The division also designed, maintained, and repaired Army vessels.

The Water Division worked in close cooperation with the War Shipping Administration and the Navy Department. The War Shipping Administration assigned ships and shipping space to the Transportation Service and took over jurisdiction of chartered vessels on the return trip from overseas destinations. The Navy Department arranged protection for all shipments and convoyed all overseas troop movements.

Rail Division.—The Rail Division made available rail transportation facilities and services for the movement of Army supplies and personnel within the United States. The division maintained close relations with the Association of American Railways, the Office of Defense Transportation, and the Interstate Commerce Commission. The Rail Division made studies of the yard capacity of railroads and

the facilities of the railroads to carry, classify, and store freight for export.

The division initiated a system of reports to facilitate the maintenance of fluid condition at port, transit storage points, general depots, and other installations. It selected sites for transit storage, ammunition storage, and loading piers. Also the division procured railroad equipment for use by the Army, including 67 locomotives, 55 locomotive cranes, and 31 flatcars.

During the fiscal year more than 5,000,000 men were routed over the railroads of the Nation by the Transportation Service. More than



900,000 carloads of freight were routed. The Army-owned fleet of tank cars was increased from over 1,000 to over 2,000 in order to insure an adequate supply of petroleum products for Army use. The operation of these cars was self-sustaining.

Because of the great demands made upon railway facilities, the Rail Division gave much attention to development of means for more efficient utilization of existing facilities.

Highway Transportation Division.—The Highway Transportation Division represented the War Department's interests in necessary highway transportation facilities and service (excluding the Army's own motor vehicles) for the movement of personnel and supplies. It developed plans for the maximum utilization of transport facilities

and worked with the Joint Action Highway Board which determined War Department highway requirements.

The Highway Transportation Division studied problems of highway traffic flow in and out of field installations and devised solutions for congested conditions. A complete national bus and truck inventory was finished during the year.

Traffic Control Division.—The Traffic Control Division directed inland transportation of the Army by commercial means and prevented in-transit delay and congestion at terminal facilities. It negotiated agreements with carriers governing services and facilities to be provided between various camps, posts, and stations and the rates to be charged. It operated Government-owned railway cars. It directed the freight traffic of the Army, which by the end of the year had attained a volume of more than 250,000 tons per month.

The most serious traffic control problem which confronted the division was the control of port-bound traffic for export. In July 1941, The Quartermaster General established a release system that operated through commercial traffic agencies. These commercial traffic agencies were later absorbed by the Transportation Service's port agencies.

Transit Storage Division.—The Transit Storage Division was set up to supervise all storage and transit operation of Army and lend-lease freight moving to ports of embarkation under permits issued by the Traffic Control Division.

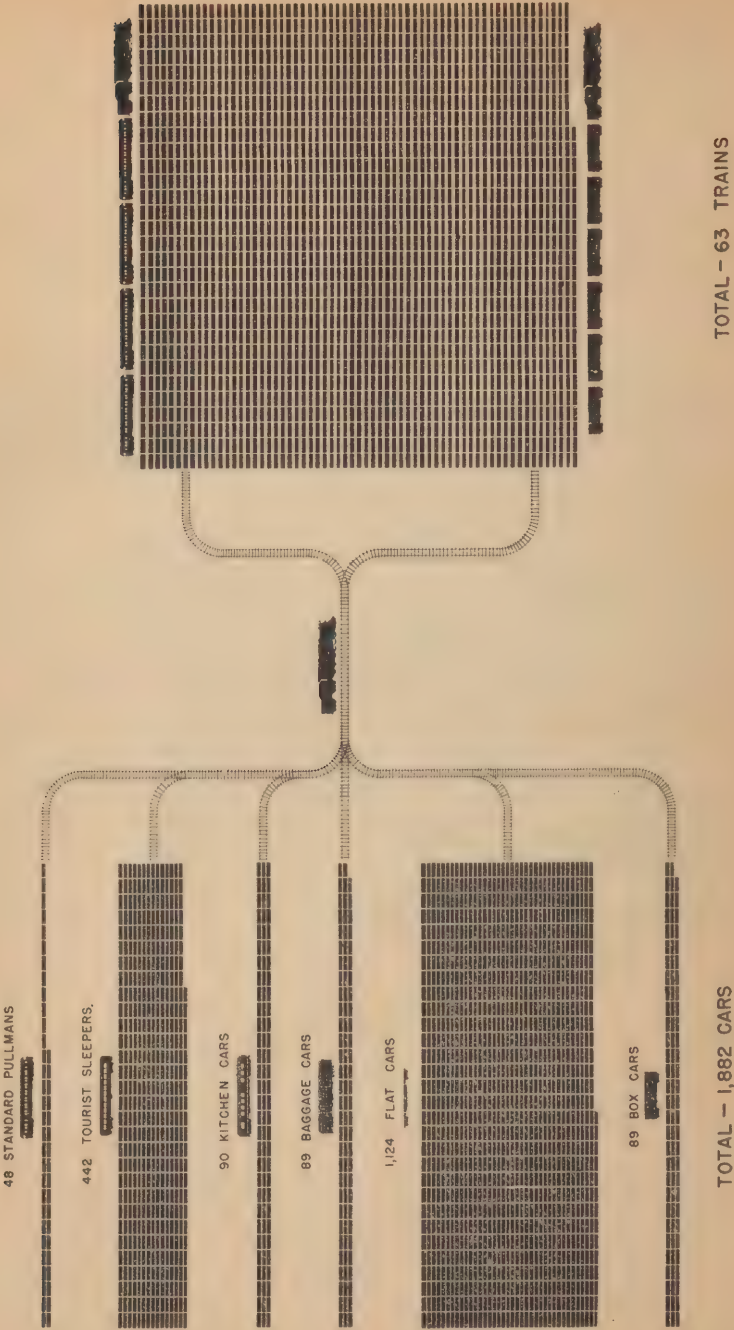
Port agencies.—The first port agency of the Transportation Service was established in March 1942. By the end of the year, port agencies were operating in eight important shipping centers with branch offices in seven other cities. These port agencies were responsible for preventing congestion in the port areas assigned to their jurisdiction by controlling the flow of supplies for foreign countries. In addition, the port agencies prevented the improper use of storage facilities and expedited the unloading of freight. The port agencies saw to it that cargoes destined for foreign nations were shipped in accordance with priorities.

Commercial traffic agencies.—Nine commercial traffic agencies had been established at ports by the end of the year in order to regularize the flow of traffic for export through freight yards, terminals, and port areas.

Holding and reconsignment points.—Whenever it was determined that a scheduled movement of freight destined for overseas could not be completed because of congestion at the port of embarkation or at the port of debarkation, an emergency diversion was made in order to prevent clogging of port facilities and the tying up of needed cars. At the end of the year, only two holding and reconsignment points were

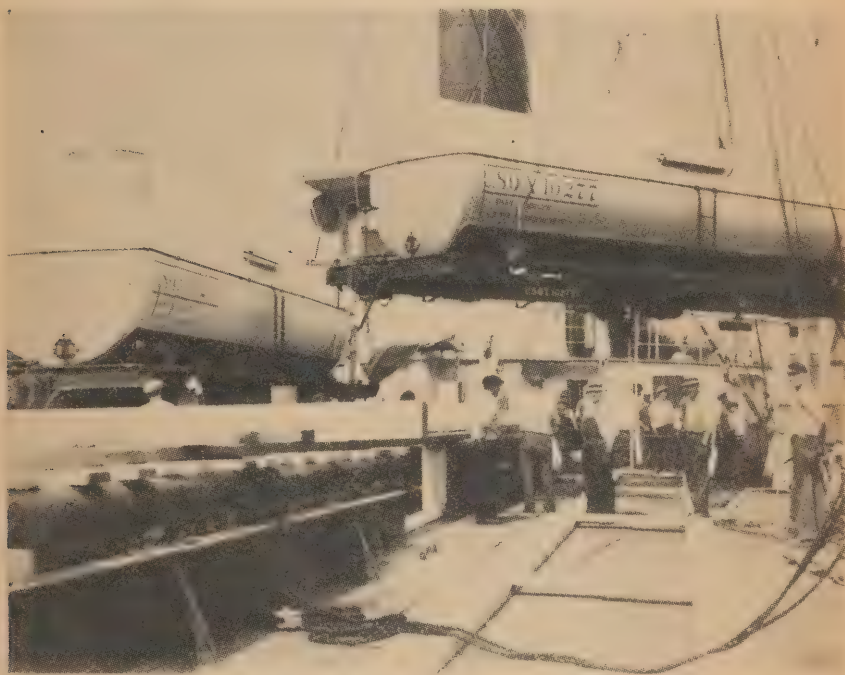
CHART VII

RAIL EQUIPMENT NECESSARY TO MOVE ONE TRIANGULAR DIVISION



in operation. Seven other points were under construction and were expected to be completed by August 1942.

Regulating stations.—Regulating stations were traffic control agencies located at strategic inland points to which trains and commercial trucks en route to ports reported in order that freight might be tabbed, traced, expedited, diverted, or reconsigned, as necessary to assure continuous flow of traffic. By the end of the fiscal year there were six stations established.



Staging areas.—Staging areas were camps in the immediate vicinity of a port of embarkation where troops were stationed awaiting instructions to embark for overseas duty. At the end of the fiscal year there were 17 staging areas.

Ports of embarkation.—Ports of embarkation were the focal points of the Transportation Service. Before the outbreak of war on December 7, 1941, the Army had two ports of embarkation. Not only were these ports greatly expanded after that date, but also five new ports and three new subports were opened. The ports of embarkation were required to load large volumes of cargo and troop divisions in extremely short periods of time.

Staff divisions.—The many different activities of the operating division of the Transportation Service were coordinated by the staff divi-

sions of the Office of the Chief of Transportation. The Planning Division made long-range transportation studies, prepared estimates of available transportation resources, and reviewed proposed plans for the use of transportation. The Operations Division insured that all troop and cargo movements were carried out as scheduled. The name indicated the work of the Legal and Fiscal Division. The Personnel Division had charge of the recruitment of personnel. Special port personnel alone numbered 35,000 persons by the end of the year. The division also had control of military personnel records. The Training, Intelligence, and Public Relations Division had charge of training of transportation personnel, received reports from intelligence sources affecting Transportation Service, and prepared information and releases about the work of the Transportation Service. The Control, Reports, and Inspection Division collected statistical data about transportation movements and conducted inspection of operations for the Chief of the Transportation Service. The Administrative Division handled correspondence and office matters for the Transportation Service. The Chief of the Transportation Service was assisted by a Deputy Chief, an Executive Officer, and an Operations Officer.

Chief of the Transportation Service.—Brig. Gen. Charles P. Gross was Chief of the Transportation Service on June 30, 1942.

GENERAL DEPOT SERVICE

The General Depot Service came into being on March 9, 1942, at the time of the creation of the Services of Supply. The Depot Section of the Supply Branch, G-4 Division of the General Staff, and the general depots administratively responsible directly to the War Department were combined to form this Service.

The headquarters of the General Depot Service directed the operation of the existing general depots and advised about the construction of the war aid depots. In addition, the General Depot Service had certain staff functions to perform in coordinating the construction, leasing, and use of storage facilities and of materials handling equipment by the other Supply Services; in developing modern materials handling methods; in conserving space; and in utilizing modern up-to-date warehousing methods. On June 30, 1942, the headquarters of the General Depot Service consisted of nine officers and 18 civilian employees.

At the end of the fiscal year there were nine general depots in operation with an eventual total warehouse capacity of 29,971,369 square feet. Eleven war aid depots were scheduled to be completed about September 1942, with a total capacity (warehouse, shed, and open storage) of 37,502,200 square feet.

The Chief of the General Depot Service on June 30, 1942, was Col. F. S. Strong, Jr.

ADMINISTRATIVE SERVICES

CHIEF OF ADMINISTRATIVE SERVICES

The Office of Chief of Administrative Services was created on March 9, 1942, to exercise supervision on behalf of the Commanding General, Services of Supply, over the Administrative Services placed under his authority. All the Administrative Services had in common the basic characteristic of responsibility for providing some type of service essential to the efficient operation of the entire Army.

Initially the following services were included under the supervision of the Chief of Administrative Services: The Adjutant General's Department, The Judge Advocate General's Department, the Finance Department, the Corps of Chaplains, Special Service, Office of the Provost Marshal General, the Army Exchange Service, and the Statistical Service.

From March 9 to June 30, 1942, several changes were made in the organization of Administrative Services. On April 27 the National Guard Bureau was removed from the Office of The Adjutant General and made responsible directly to the Commanding General, Services of Supply, reporting through the Chief of Administrative Services. On June 27, the status of the Executive for Reserve and R. O. T. C. Affairs was similarly changed. Circular No. 169, W. D., 1942, established the Women's Army Auxiliary Corps as a service functioning under the general supervision of the Chief of Administrative Services.

The Chief of Administrative Services exercised supervision of the operation of each Administrative Service. Routine matters pertaining to a Service were not reviewed in his office. All matters, however, involving interpretation of existing policies or formulation of new policies were examined by the Chief's office.

The Chief of Administrative Services also assisted the subordinate services in the reorganization of their respective offices along clear-cut functional lines.

To facilitate unity of action in civilian personnel policy matters and administration, a committee was set up consisting of members from each service with a chairman representing the Office of the Chief of Administrative Services.

Through one of its branches, the Office of the Chief of Administrative Services represented the War Department in all matters pertaining to civilian defense.

The Office of the Chief of Administrative Services on June 30, 1942, had a personnel of 16 officers and 26 civilians. The office was organized into an Administrative Branch, a Control and Inspection Branch, a Civil Defense Branch, and four branches that divided among themselves on an agency basis the work of maintaining constant relations with the various administrative services.

The Chief of Administrative Services on June 30, 1942, was Maj. Gen. John P. Smith.

STATISTICAL SERVICE

The Statistical Service provided consolidated information on procurement progress and the raw material needs of the War Department. Before March 9, 1942, it was the Statistics Branch, Office of the Under Secretary of War. After that date it was one of the Administrative Services of the Services of Supply.

During the fiscal year 1942 one of the principal reports prepared by the Statistical Service was a Monthly Status Report which showed in detail the stock on hand, program requirements, production objectives, orders, deliveries, and financing for the major items in the Army Supply Program. This report showed past, current, and future status in the acquisition of military supplies. Since the initial issue of this report in February 1942, a new feature of presenting diagrams on the status of more than 50 important items of procurement was added. The Monthly Status Report listed more than 1,200 critical and essential items.

Another important development of the year was the beginning of a detailed report on the raw and basic industrial material demands of the Supply Services. A classification of raw and basic industrial materials was jointly agreed upon by the Statistics Division of the Office of the Under Secretary of War and the Division of Research and Statistics of the Office of Production Management. The Supply Arms and Services were instructed to prepare records of the unit weight requirement of each finished item for these raw and basic industrial materials. The first report on material requirements projected beyond 1943 was completed in May 1942, for use by the Resources Division and the Deputy Chief of Staff for Requirements and Resources, Services of Supply.

During the fiscal year the Statistical Service continued to prepare three types of reports previously instituted. One of these was a monthly report requested by the White House on Selected Progress Data including strength of the Army, procurement status of certain items, and shipping data. Another was a Weekly Statistical Summary on procurement progress, which was published in four sections until April 1942, and thereafter in a consolidated single section.

Material was prepared for presentation periodically to the members of the House Committee on Military Affairs and to the members of the Senate Committee on Military Affairs.

Toward the end of the year, arrangements were made for a new type of report to show the state of equipment preparedness of military units of the Army of the United States.

At the same time that these improvements were made in statistical reporting, efforts were made to eliminate many reports previously required from the Supply Services or prepared by the Statistical Service. As a result of this study it was found that 204 of the 455 reports prepared by the Supply Services could be eliminated. Thirty-five reports prepared by the Statistical Service were terminated; at the end of the fiscal year only 16 recurring reports were prepared by the Service.

As the central statistical office for the War Department on all procurement and supply matters, the Statistical Service was responsible for assisting various agencies in the improvement of their own statistical reporting.

A tabulating section in the Statistical Service was responsible for the processing of different reports. From 11 to 16 reports were processed monthly by this section during the year.

The Statistical Service in the fiscal year 1942 was organized into separate units for maintaining liaison with the Ordnance Department, Quartermaster Corps, Signal Corps, Chemical Warfare Service, Corps of Engineers, Medical Department, and Army Air Forces. Other units handled transportation, construction, basic industrial materials, and international aid reporting. Editorial, machine, and reproduction units were responsible for the final preparation of reports. In addition, there were the necessary administrative units for the internal management and operation of the Service.

The personnel on duty at the beginning of the fiscal year comprised 21 officers and 186 civilians, and at the close of the year 40 officers and 235 civilians.

Brig. Gen. Leonard P. Ayres, who retired on June 30, 1942, was Director of the Statistics Branch, Office of the Under Secretary of War, and Chief of the Statistical Service, Services of Supply, during the year.

THE ADJUTANT GENERAL'S OFFICE

The Adjutant General's Department recorded, authenticated, and circulated all official communications from the Secretary of War and from the Chief of Staff. It served as the central personnel office for all military personnel of the Army of the United States, supervising the recruitment and assignment of officers and enlisted men and maintaining all service records. It received official returns from all

camp, posts, and stations, both within the United States and overseas, showing the strength of all units of the Army of the United States. It kept records on administration of C. C. C. camps. It had charge of official correspondence; arranged the distribution of circulars, administrative orders, and special orders; and maintained custody of many of the permanent records of the War Department. The Adjutant General's Office also had charge of Army disciplinary barracks.

The Adjutant General's Office issued certificates authorizing the manufacture and sale of military insignia; it announced awards of decorations and service medals; it published the Army Register and the Army Directory; it published material for Army Extension Courses; and it conferred official names upon all posts and other installations.

The Postal Division, which had been set up as a separate major unit of The Adjutant General's Office on March 20, 1942, was reconstituted as the Postal Service. This service, encircling the globe, was an important factor in maintaining the morale of the armed forces. Overseas post offices by June 30, 1942, numbered more than 150, eight times the number existing when the war was declared on December 8, 1941. Within the United States there were some 800 Army post offices. During the fiscal year 1942 a total of 43,537,556 pieces of mail was handled.

The Adjutant General's Office provided officer personnel to perform administrative duties for all branches of the Army. The pressing need for trained commissioned personnel was met by establishment of the Adjutant General's School at Fort Washington, Maryland.

All phases of the work of the Adjutant General's Office grew rapidly in the fiscal year. Not only were the nine older branches enlarged, but also five new branches were created.

On June 30, 1942, the Adjutant General's Office, in addition to the executive office and a control branch, consisted of four principal divisions. The Personnel Division included an Enlisted Branch, an Officer Procurement Branch, a Civilian Component's Branch, and an Officers Branch. The Operations Division was made up of a Plans and Training Branch, a Publications Branch, a Machine Records Branch, and a Miscellaneous Branch. The Administrative Division supervised the Allowance and Allotment Branch, the Demobilized Personnel Branch, and the Executive Branch. The Army Postal Service was the fourth major division of the Adjutant General's Office.

The Adjutant General on June 30, 1942, was Maj. Gen. J. A. Ulio.

JUDGE ADVOCATE GENERAL'S DEPARTMENT

The Judge Advocate General of the Army was the chief law officer of the War Department, and the chief legal adviser to the Secretary of War, the War Department, and the Military Establishment. He supervised the system of military justice. His office reviewed the records of all trials by general courts martial, courts of inquiry, and military commissions. His duties included the furnishing of advice about legal phases of the business, property, and financial operations under the jurisdiction of the Secretary of War, and about the legal questions growing out of the administration, control, discipline, status, civil relations, and activities of personnel of the Military Establishment.

The Judge Advocate General was the custodian of the records of all general courts martial, courts of inquiry, and military commissions, and of all papers relating to the title to lands in the field under the control of the War Department. The control and coordination of all patent activities of the War Department and the Army were under his direction. The Judge Advocate General represented the War Department in all litigation involving the Department, in cooperation with the Department of Justice.

The work of the Judge Advocate General in time of war fell into three great divisions: judicial, advisory, and administrative. No sentence of court martial involving death, dismissal, or discharge not suspended, or confinement in a penitentiary might be ordered executed before review by the Judge Advocate General and the Board of Review in his office. All other sentences of general courts martial were subject to vacation or reduction upon recommendation of the Judge Advocate General.

The advisory work of the Judge Advocate General grew in volume with the expansion of the strength and the increasing activities of the Army. Questions involving almost every conceivable phase of law came to his office.

At the beginning of the fiscal year 1942, claims, litigation, and taxation were handled by one division of the office. The volume of the work necessitated the creation during the year of two divisions to handle such work and the formulation of plans for a third division. A Control Branch was set up early in April 1942. As a result of its studies, extensive changes were made in the research facilities of the Office of the Judge Advocate General.

The administrative work of the Judge Advocate General also increased. He selected and trained all judge advocates of the Army and assigned them to stations. He provided judge advocates with advice, with law books, and with information about current legal developments. A Military Personnel Division was created to super-

wise the procedure of selection and appointment of new judge advocates and to handle recommendations for their assignment.

In February 1942, the Judge Advocate General's School was established, originally to provide a 6-weeks' refresher course in military law for reserve judge advocates called to active duty. As the supply of reserve judge advocates was exhausted and the appointment of civilians as temporary judge advocates in the Army of the United States began, the school's course was extended to 8 and later to 10 weeks, and expanded to include the basic military subjects required by a newly appointed officer. One hundred fifty-nine officers graduated from the school during the fiscal year and 61 were in attendance at the end of the year. In addition to the Judge Advocate General's School proper, the Office of the Judge Advocate General was itself a training school for judge advocates.

The function of guiding and directing judge advocates in the field in the performance of their duties assumed great importance with the enormous increase in the number of judge advocates and the considerable decrease in their average experience. Much was done through informal correspondence.

The wartime expansion in the personnel of the Judge Advocate General's Department paralleled that of other branches. On July 1, 1940, there were approximately 105 officers on duty with the Department, 44 of whom were in the Office of the Judge Advocate General. A year later there were 190 officers on duty with the Department, 100 of them in the Office of the Judge Advocate General. On June 30, 1942, the Department contained 771 officers, of whom 116 were on duty in the Office of the Judge Advocate General. Of the 771, 110 were officers of the Regular Army, active and retired, 435 held basic commissions in the Officers' Reserve Corps, 81 were officers of the National Guard of the United States, and 92 held temporary commissions.

In the fiscal year 1940 there were 1,851 trials by general courts martial; in the fiscal year 1941 there were 5,388, and in the year ending June 30, 1942, there were 6,066. This increase was not in proportion to the increase in the strength of the Army.

In addition to reviewing the records of the trials by general courts martial, the Judge Advocate General's Office in the fiscal year 1942 rendered 7,979 written opinions, compared with 4,762 opinions in 1941 and 3,240 opinions in 1940.

On June 30, 1942, the organization of the Office of the Judge Advocate General was divided into two groups of activities each supervised by an Assistant Judge Advocate General. One group included an Executive Division, a Military Personnel Division, the Judge Advocate General's School, the Military Justice Division, and two Boards of Review. The other group included a Claims Division, a Contracts Division, a Patents Division, a Tax and Litigation Divi-

sion, a Military Reservations Division, a Military Affairs Division, and a War Plans Division. On June 30, 1942, the Judge Advocate General was Maj. Gen. Myron C. Cramer.

PROVOST MARSHAL GENERAL

The Office of the Provost Marshal General was established on July 31, 1941, to review and perfect plans for handling enemy aliens upon the advent of war. On September 26, 1941, the Corps of Military Police was transferred to the supervision of the office, and on November 17, 1941, it assumed responsibility for loyalty investigations previously conducted by G-2 Division of the General Staff. On March 9, 1942, the plant protection activities of the Office of the Under Secretary of War were transferred to the Provost Marshal General.

The work of the Provost Marshal General was divided into four principal divisions.

Aliens Division.—The Aliens Division was responsible for handling all matters for the War Department concerning enemy aliens and prisoners of war within the United States. In cooperation with the Department of State and the Department of Justice, the division handled petitions and made arrangements for the repatriation of enemy aliens.

In accordance with the Geneva Prisoner of War Convention of 1929, the Aliens Division established a Prisoner of War Information Bureau. This bureau communicated to the International Red Cross in Geneva, Switzerland, information about enemy prisoners of war in the hands of the United States Army. In turn, the bureau received information about American prisoners of war and interned citizens in the hands of enemy powers.

Military Police Division.—The Military Police Division directed the administration of all matters concerning the Corps of Military Police. When the Provost Marshal General's Office was established, there were only 3 Military Police Battalions in the zone of the interior with less than 2,000 officers and men. By the end of the fiscal year 1942 there were 72 Military Police Escort Guard Companies, 47 Military Police Companies (Aviation), and 28 additional Military Police Companies. Nine Military Police Companies were attached to the corps areas; 4 battalions and 3 companies were attached to 4 field armies; 118 Military Police Detachments were stationed at camps, posts, and stations; and 44 Military Police Platoons were attached to divisions. On duty with all these organizations were 3,217 officers and 60,785 enlisted men.

The Military Police Division prepared Tables of Organization and Mobilization Training Programs for all Military Police units. A Military Police Board reviewed recommendations.

In April 1942, a replacement training center was established at Fort Riley, Kans. In February 1942, a Provost Marshal General School was opened at Fort Myer, Va. Two classes with a total of 395 students were graduated from the school. Because of the rapid expansion of the Corps of Military Police, the school was moved to Fort Oglethorpe, Ga., in May 1942, and named The Provost Marshal General's School Center. The center had a capacity of 3,000 students. Four schools were conducted there.

Investigations Division.—The Investigations Division established in November 1941, made inquiries concerning applicants for commissions and investigated civilian employees and individuals who might be entrusted with war information.

Internal Security Division.—In October 1941, all matters concerning potential domestic disturbances and disasters were transferred to the Provost Marshal General's Office from the War Department General Staff. After March 9, 1942, the Internal Security Division also supervised protective measures for plants and facilities producing war goods. A fingerprinting program was initiated for all employees in war production plants. Inspections were made of fire prevention precautions and steps taken to handle industrial hazards and sabotage. Procedures for the identification and clearance of visitors to war plants were also developed. Plans were made for the organization of plant guards as an auxiliary to the Military Police.

A School of Military Government was established at the University of Virginia in May 1942 to train officers for duty as members of civilian affairs sections on the staffs of American forces abroad. Fifty students from the grade of captain to colonel were enrolled in the initial course of 16 weeks' duration.

At the time when the Office of the Provost Marshal General was created, its personnel consisted of 5 officers and 1 civilian. On June 30, 1942, there were 130 officers and 360 civilians on duty in the Washington office. The Provost Marshal General at the end of the fiscal year was Maj. Gen. Allen W. Gullion.

OFFICE OF THE CHIEF OF CHAPLAINS

The activities of the Corps of Chaplains were designed to insure that an appropriate, satisfactory, and adequate pastoral ministry was provided to meet the spiritual needs and desires of all members of the Army. The aim was that officer and soldier alike, fortified and inspired by the practices of his faith, might develop a better spiritual and military character.

The duties of the Chief of Chaplains included the recruitment of chaplains; making recommendations to the War Department about the proper number and denominational distribution of chaplains; the supervision of chaplain activities; the preparation of suitable

training material for the adequate instruction of chaplains; the procurement and distribution of Testaments for military personnel; liaison with various national religious bodies; and advising proper authorities in the War Department about the religious and moral welfare of the Army.

Chaplains held appropriate religious services or arranged for services for all elements of the command on Sunday or weekdays, and conducted Sunday Schools, Bible classes, missions, confessions, and such other religious or patriotic exercises as might be appropriate to special occasions. The interest in and utilization of the religious services held by chaplains was indicated by the attendance figure of 21,264,395 during the fiscal year 1942.

The number of chaplains increased with the growth of the Army. On July 1, 1941, the Corps of Chaplains numbered 1,810, including 480 in the Reserves on inactive duty status. On June 30, 1942, the Corps numbered 2,955, including 67 on an inactive duty status. The number of religious services held during the fiscal year totaled 261,248 compared with 79,348 in the preceding year.

The recruiting problem of the Corps of Chaplains has been a difficult one. The activities of chaplains were closely analogous to those of clergymen in civil life. Clergymen who possessed the educational and theological training, the physical stamina, and the qualities of leadership required for a chaplain were in great demand in the civilian ministry.

The Chief of Chaplains maintained relations with chaplains at camps, posts, and stations within the United States and with chaplains of overseas forces.

On February 2, 1942, the Chaplain School was activated at Fort Benjamin Harrison, Ind., with an authorized student body of 75.

During the past year the Corps of Chaplains procured and distributed Protestant, Catholic, and Jewish versions of the Scriptures to the military personnel; prepared a Chaplains' Exhibit for the Army War Show; provided altar equipment and communion sets for Army chapels through the Chief of Chaplains Religious Fund; collaborated with the Public Relations Bureau in presenting the "Chaplain Jim" radio program; revised the Army and Navy Hymnal; and compiled the Song and Service Book for Ship and Field (Army and Navy).

The Chief of Chaplains on June 30, 1942, was Chaplain (Brig. Gen.) Wm. R. Arnold.

SPECIAL SERVICE

Special Service handled welfare, recreation, and general informational activities for the Army of the United States. The Service trained personnel and units to carry on its activities in camps, posts,

and stations. It operated facilities not specifically assigned to other units and carried on research about the individual needs of the soldier in order to develop plans and procedures for improving his welfare. The Morale Division of The Adjutant General's Office was first created on July 20, 1940. On March 3, 1941, it became the Morale Branch in the Office of the Secretary of War; the designation was changed to Special Services Branch on January 15, 1942. On March 9 the Branch became the Special Service of the Services of Supply.

The Army Motion Picture Service (Branch) operated 500 theaters in continental United States, with a daily attendance of 260,000 and an annual attendance of 100,000,000. Over 3,300 separate programs were given each week.

The Athletic and Recreation Branch made arrangements for camp entertainments provided by U. S. O.-Camp Shows, Inc. During the year, some 25 musical variety shows, 50 name bands, and some 75 motion picture stars visited troops stationed in the continental United States and certain nearby bases. The branch supervised the operation of 244 service clubs and cafeterias, 195 guest houses, 1,246 recreational halls, 2,000 day rooms, and 53 recreational camps. The branch arranged for the preparation and distribution of the Army Song Book. It also produced an Amateur Theatrical Manual and obtained stage equipment for 150 theaters and 35 field houses.

The Athletic and Recreation Branch prepared a Technical Manual on sports and games for the general use of the Army. In addition, it undertook a physical fitness test of about 8,000 soldiers in ten Army camps. The results were presented to appropriate authorities. The branch established qualifications for 400 hostesses, 150 librarians, and 45 field representatives of Special Service and prepared regulations governing the activities of these individuals.

The Education Branch, in collaboration with 75 colleges and universities, organized, on April 1, 1942, the Army Institute to provide correspondence courses to soldiers.

The Information Branch began publication of the Army newspaper Yank through an office in New York and provided news maps and posters for distribution by the Education Branch. The branch arranged for short-wave programs to be broadcast to troops overseas, and made transcriptions of radio programs for broadcast abroad. Through its Los Angeles studio unit, the branch made information films for use by the troops. A New York unit furnished current news reels. Publication activities were centered in New York City. The film unit was operated by a special detachment from the Signal Corps.

Through its Plans and Training Branch, Special Service supplied athletic and recreational equipment directly to troops proceeding overseas, as well as small game kits for use on transports.

In January 1942, recreational companies in the Army were authorized. These were designated Special Service units, each consisting of 5 officers and 116 men, especially equipped and trained to provide athletic, entertainment, library, motion picture, and other recreational or informational services to troops overseas. One platoon of a Special Service unit was trained and equipped to operate post exchanges overseas.

In February 1942, a school for Special Service was established at Fort George G. Meade, Md. Over 800 officers serving in camps, posts, and stations throughout the United States had been enrolled in this school by the end of the fiscal year.

During the fiscal year, officers of headquarters, Special Service, made 308 visits to 109 camps, posts, and stations. A multilithed publication, Notes on Morale Activities, was distributed to all Special Service officers. The Service maintained close relations with the United Service Organizations and with the Red Cross. On July 1, 1941, the Office of the Director of Special Service consisted of 42 officers; at the end of the year there were 132 officers. The Chief of Special Service on June 30, 1942, was Brig. Gen. Frederick H. Osborn.

ARMY EXCHANGE SERVICE

The Army Exchange Service was set up July 1, 1941, as a division of the Morale Branch (later Special Services Branch) of the War Department. On March 9, 1942, the Army Exchange Service became a separate Administrative Service under the Services of Supply.

The Army Exchange Service was organized into six divisions: Purchasing, Finance, Planning, Personnel, Operations, and Executive. The position of General Counsel was added to the staff of the Chief of Army Exchange Service on May 21, 1942.

The Executive Division, in addition to providing administrative services for the Army Exchange Service, supervised the efforts of the other divisions and detailed officers to make inspections of the more important exchange activities within the continental limits of the United States and, in a few cases, outside the continental limits.

The Finance Division was responsible for all Army Exchange Service funds, and prepared reports showing revenues, expenditures, and the financial position of the Service. The division examined, recommended, disbursed, and collected loans to exchanges. The number of loans increased from 11, totaling \$225,000, during the first quarter of the fiscal year to 96, totaling \$4,860,000 in the last quarter.

One of the most important activities of the Purchasing Division was negotiation of price agreements. Potential savings to military personnel in excess of \$6,000,000 per year resulted.

Other activities of the Purchasing Division included inauguration of illustrated price listings; equipping task forces with exchange

merchandise; revising price agreements to conform with price ceilings established by the Office of Price Administration; compiling basic lists of essential exchange items to assist exchange officers in estimating task force requirements and the Quartermaster General in allocating warehouse stocks for overseas exchanges; and establishing weekly service to overseas exchanges.

The Personnel Division organized the Army Exchange School, recruited candidates to attend the school, and processed their commissions. Exchanges were assisted in their personnel programs and procedures. A Civilian Retail Recruiting Committee was set up to assist in obtaining candidates for the Exchange School.

The Operations Division provided a general management policy for exchanges, coordinated its efforts with the Purchasing Division to obtain preference ratings for critical and scarce materials essential to exchanges; maintained contact with the War Production Board, the Office of Price Administration, and the Army and Navy Munitions Board; and furnished some trained personnel for overseas assignments.

Among other activities, the Plans and Training Division developed plans for establishing and operating mobile exchanges, prepared designs for the uniforms of civilian employees of exchanges, and arranged with the Provost Marshal General to establish "canteens" for prisoners of war and internment camps. A ratio of use per man, per item, per month for overseas troops was determined. After June 2, 1942, the Plans and Training Division had staff supervision of the Army Exchange Training School which was moved from Fort George G. Meade, Md., to the Graduate School, Princeton, N. J.

The Chief of the Army Exchange Service on June 30, 1942, was Brig. Gen. Isaac Spalding.

FINANCE DEPARTMENT

The Finance Department was responsible for the prompt payment of all War Department obligations—pay, mileage, and travel expenses of personnel; commercial invoices; contracts; allotments; family allowances; and 6 months' gratuity pay to beneficiaries of deceased military personnel. A second responsibility was to account for all payments by appropriation and purpose. Until March 9, 1942, the Chief of Finance was the Budget Officer for the War Department; on that date, this work was transferred to the Fiscal Division, Headquarters, Services of Supply.

The Finance Department also audited all War Department property accounts and the accounts of the Red Cross; it purchased, recorded, and verified deductions for war bonds under the pay reservation plan for both military and civilian personnel of the War Department; it accepted, accounted for, and repaid soldiers' deposits (personal sav-

ings) ; it handled the fiscal affairs of the Civilian Conservation Corps and the Selective Service System; and it adjusted claims against the War Department for damage to personal property.

For the fiscal year ending June 30, 1942, disbursements for military activities totaled more than \$14,000,000,000. In the preceding fiscal year total disbursements came to \$3,775,000,000. Of 5,344 stock record accounts subject to audit by the Chief of Finance, more than 4,500 such accounts were audited during the fiscal year. The number audited was greater than the total number of stock record accounts maintained in the preceding fiscal year. Deductions of pay for Government insurance, for war bonds, and for other purposes amounted to more than \$50,000,000.

During the year the formal training of military personnel for the Finance Department was centered in the Army Finance School and the replacement training center located at Fort Benjamin Harrison. Operating under a single command, these two educational units provided 4 courses of instruction : a basic enlisted course, an advanced enlisted course, an officer candidate course, and an officers' course. During the year, 1,399 men were graduated from these 4 courses, 987 of them from the basic course. Another 1,200 were enrolled in these courses at the end of the year.

Two important developments during the fiscal year 1942 increased considerably the work of the Finance Department. The Pay Readjustment Act of June 16, 1942, provided for increases in pay for enlisted men and for the lower grades of commissioned officers as well as for a simplification in rate structure.

The Servicemen's Dependents Allowance Act of June 23, 1942, authorized the payment of monthly allowances to dependents of enlisted men of grade 4 and below. This act placed upon the Finance Department a new responsibility which required additional personnel.

In addition to the Office of the Chief of Finance, there were finance offices located at Army posts in large cities and at headquarters of major tactical units. At the end of the fiscal year 1942 there were 437 of these finance offices in operation, compared with 247 in 1941 and 122 in 1940.

The Office of the Chief of Finance, at the end of the year, consisted of an Administrative Division, Control Division, Mail and Records Division, Personnel and Planning Division, Central Retaining Accounts Office at Fort Benjamin Harrison, War Bond Division, Red Cross Audit Division, Claims Division, Fiscal Division, Property Auditing Division, Advisory and Regulating Division, and an Accounts Services.

The Chief of Finance on June 30, 1942, was Maj. Gen. H. K. Loughry.

WOMEN'S ARMY AUXILIARY CORPS

The Women's Army Auxiliary Corps was created by an Act of Congress approved May 14, 1942. The purpose of the organization was to make available to the War Department and the military establishment the knowledge, skill, and special training of the women of the Nation.

Mrs. Oveta Culp Hobby was appointed Director of the W. A. A. C. on May 16, 1942, and assumed the duties of the office on the same day. The first woman member of the W. A. A. C. was appointed two days later. In the period from May 16 to June 30, 1942, the basic plans for organization of the Corps and for the recruitment of personnel were perfected and put into operation.

W. A. A. C. companies were to be activated and organized in accordance with prepared Tables of Organization. They were to be located at various camps, posts, and stations under the command of the organization to which attached. The post headquarters type of company, it was expected, would assume the normal duties of existing post headquarters companies. It would take over the clerical work, the driving of light vehicles, the operation of communication systems, the operation of theaters, and the operation of libraries, as well as assist in the duties normally assigned to hostesses. The headquarters type of company and other companies were to be housed in barracks comparable to those provided by military personnel.

The Commanding General, Army Air Forces, requested that the Corps enroll and train the volunteers working for the Aircraft Warning Service.

The first problem in enrolling personnel was to obtain officers to administer the Corps. Applicants for the officer candidate school were first sifted according to the results of a mental alertness test. They were then interviewed by Army officers and women assistants at local Army recruiting stations and at corps area headquarters. The women assistants who helped in the selection of officer candidates were chosen from personnel experts and Red Cross, Y. W. C. A., and Y. W. H. A. officials.

At each corps area headquarters two women representatives of the Director of the W. A. A. C. assisted corps area commanders. These representatives, also volunteers, were selected from deans of women's colleges, heads of personnel departments, and others with qualifying experience. All applications regarded as outstanding by local and corps area recruiting advisers were sent to the Director at the War Department. A board of 12 psychiatrists examined applications. Assisted by the 18 representatives who had been at the various corps area headquarters, the Director made the final selection of candidates to receive officer training.

Arrangements were made for recruiting the Station Complement and the Band through the Ninth Corps Area. Auxiliaries were to be recruited through the Army recruiting service on an occupational specialist basis and ordered to active duty as the need arose.

The officer candidate school and the replacement training center for auxiliaries were established at Fort Des Moines, Iowa. The first school was scheduled to open on July 20, 1942.

NATIONAL GUARD BUREAU

The National Guard Bureau was responsible for the administration of National Guard and State Guard affairs.

The National Guards of the various States were called to 12 months' active training by the act of Congress of August 27, 1940. This period was extended by the Act of August 18, 1941, and continued for the duration of the war and 6 months thereafter by the act of December 13, 1941.

The mobilization of the National Guard into the Army of the United States reduced the great amount of work performed by the National Guard Bureau in supervising the property and disbursement accounts of the National Guard while under State jurisdiction. Of the millions of dollars worth of Federal clothing and equipment issued or loaned to the National Guard in the past 25 years, the property accountability was cleared in practically all States. A few minor outstanding accounts covering losses by fire, theft, and flood may be cleared by Congressional action.

Personnel matters.—At the time the National Guard was inducted into Federal service, there were many officers of one arm or service who were required by the numerous conversions of units to be commissioned in a new arm or service. Those officers, unable to meet hurriedly the requirements for professional qualification for a new commission, were granted a period of time to complete the correspondence courses or other missing requirements for the new arm or service in which they were commissioned.

When the National Guard entered upon extended service beyond the original 12 months contemplated in 1940, the question of commissions in new arms or services was reconsidered. It was decided that if an officer had been performing satisfactory service in a new arm or service in the grade provisionally extended to him under a waiver, no other formality would be required to meet the proper qualifications. The National Guard Bureau proposed a rule that Federal recognition be extended to an officer's commission upon completion of six months' satisfactory service, as evidenced by efficiency reports normally rendered and forwarded to the National Guard Bureau for its files. Such a rule was adopted in Circular No. 214, W. D., 1942.

The Pay Readjustment Act, passed by Congress in June 1942, resulted in the filing of thousands of cases with the National Guard Bureau from National Guard officers for statements of service.

Construction.—The Military Appropriations Act of 1942 provided \$3,000,000 for construction at exclusive National Guard camps. Because of the extraordinary construction demands of the war efforts, the Commanding General, Services of Supply, on March 12, 1942, announced a policy restricting National Guard construction to projects required by the War Department for the prosecution of the war.

Leases were renewed on the National Guard target ranges considered desirable for retention because of location or the value of installations. All other leases were canceled or allowed to expire on June 30, 1942.

State Guards.—With the induction of the National Guard into Federal service, the States were left without adequate forces of their own for maintaining order and protecting life and property. Congress gave its consent to the creation of State Guards by the Act of October 21, 1940. By June 30, 1941, State Guards had been organized in 37 States and had a mustered strength of nearly 89,000 men. At the conclusion of the fiscal year ending June 30, 1942, State Guards had been created in 44 States, Alaska, Hawaii, and Puerto Rico. The total strength consisted of 157,032 officers and men.

The Chief of the National Guard Bureau was charged with promulgating the necessary orders and instructions for the training of State Guards, in accordance with policies determined by the Commanding General, Services of Supply.

The War Department provided, free of charge, a limited amount of obsolete, nonstandard C. C. C. and Regular Army clothing and equipage to State Guards with a value of more than \$4,500,000.

Because of its own increased demands, the War Department during the year withdrew some 130,000 rifles, Enfield, caliber .30, and substituted about 118,000 12-gage shotguns, and a considerable quantity of caliber .45 submachine guns.

Organization.—The National Guard Bureau was set up by the Act of June 15, 1933, as successor to the former Militia Bureau created in 1916. The Bureau was responsible to the Chief of Staff. At the beginning of the fiscal year 1942, the National Guard Bureau had 23 officers and 119 civilian employees. It was organized into 7 major divisions: Administrative, Budget and Fiscal, Aviation, Organization and Training, Personnel, Regulations, and Supply.

During the fiscal year the personnel of the National Guard Bureau declined and a number of consolidations were made in administrative organization.

Under the reorganization of the War Department provided for in War Department Circular No. 59, March 2, 1942, the National Guard

Bureau was made a part of the Office of The Adjutant General. The disruption of direct communication between the National Guard and the States resulting from this move was ended by General Order No. 9, Headquarters, Services of Supply, April 27, 1942, which made the National Guard Bureau a separate Administrative Service reporting to the Commanding General, Services of Supply, through the Chief of Administrative Services.

The Chief of the National Guard Bureau on June 30, 1942, was Maj. Gen. John F. Williams.

OFFICE OF THE EXECUTIVE FOR RESERVE AND R. O. T. C. AFFAIRS

The Office of the Executive for Reserve and R. O. T. C. Affairs was established to provide within the War Department a central point of contact for Reserve officers and for educators and others interested in the Reserve Officers Training Corps. The office recommended to appropriate divisions of the General Staff the initiation and modification of policies affecting the Organized Reserves or the R. O. T. C.

Organized Reserves.—By July 1, 1941, approximately one-half of the eligible Reserve officers had been called to active duty. Upon the declaration of war, the Organized Reserve divisions were mobilized. Careful plans prepared for this eventuality enabled the first three such divisions to be activated 58 days before the date scheduled in the general mobilization plan. Reserve officers who had not yet entered upon active duty were offered the opportunity to qualify for service with the newly activated divisions. By June 30, 1942, almost all physically fit officers of troop age had been absorbed. Officers remaining in essential war industries were asked to choose between resigning their commissions and making themselves available for active duty.

With the mobilization of the Organized Reserves, the Enlisted Reserve Corps was assigned a new role in order to provide a continuing supply of officers and men trained in technical and scientific fields. Many college students could then enlist in the Corps and continue their studies. Those who failed to meet satisfactory standards of academic work might be called to active duty at any time, and all were available for active duty when the need for additional manpower arose. All the members of the advanced course, Senior Division, R. O. T. C., were also members of the Enlisted Reserve Corps.

Reserve Officers Training Corps.—The Reserve Officers Training Corps continued with renewed vigor its mission of producing Reserve officers. During the fiscal year 1942, 2,000 more advanced course

contracts were made than in the previous fiscal year, and a further increase of 3,000 was planned for the fiscal year 1943.

Thirty-two new units were authorized during the year. Summer training camps were discontinued for the duration of the war.

The Executive for Reserve and R. O. T. C. Affairs on June 30, 1942, was Brig. Gen. Frank E. Love.

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